

MOTOR AGE

Vol. VII No. 5

CHICAGO, FEBRUARY 2, 1905

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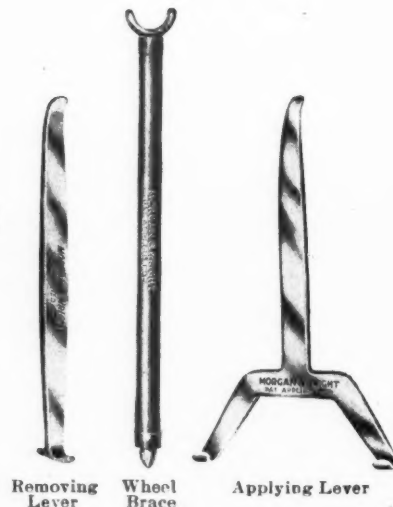
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MOTOR AGE

VOL. VII. NO. 5

CHICAGO, FEBRUARY 2, 1905

\$2.00 Per Year

CHRONOLOGICAL STORY OF ORMOND

Ormond, Fla., Jan. 26—Morning—Jack-Frost, Old Borias and Charley Gillette are the three most damned men in "sunny" Florida this morning. It is almost even up among them for first choice. Gillette's name, though, is the most mentioned. It was he on whom was fixed the crime of figuring out the tide wrong this morning, so that when

until 2 o'clock this afternoon. The white-capped ocean was tossing savagely and the north wind was blowing fiercely. It is doubtful whether there could have been racing anyhow; the ice has formed in the radiators of many of the cars and gasoline torches were in demand to thaw them out.

The newspaper boys are in a state of mind

wire to Jacksonville for transmission to Chicago. The MOTOR AGE correspondent perhaps was jollied by the assurance that western wires were clearer than those north. The New York boys were told of but one through wire and they say this morning that storm conditions at the north are worse than ever.

Florida is having the severest cold it has



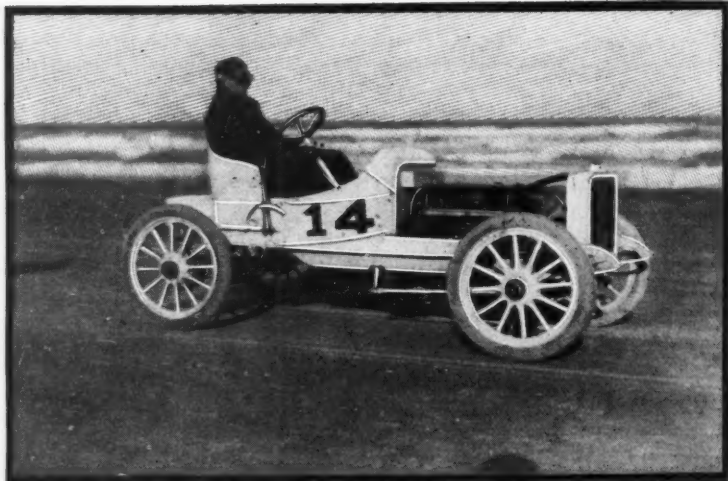
WHAT ARE THE WILD WAVES SAYING, SISTER?

two score of officials and newspaper boys who had been routed out of bed at daylight for races scheduled to be run between 7 and 9 o'clock, found nothing but a narrow strip of racing sand in front of the Inn and the tide rising rapidly. By the time the timing apparatus was set up there was no race course left at all and a postponement had to be made

to know how the "stuff" fared last night and this morning has fared. By 8 o'clock last night the MOTOR AGE story of the record trials and the Dewar cup race was on the

EDITOR'S NOTE—In this issue the story of the Florida beach tournament is continued from the date up to which it was carried last week in Motor Age.

experienced since the blizzard of 1885, which killed the orange trees. They say that no such calamity will come this time, as the trees are dormant and the sap is not yet running. Two weeks hence it would be otherwise. Fires are burning under the trees in the orange groves and at 9 o'clock the thermometer showed 20 degrees. The sun, though,



GUY VAUGHAN IN THE DECAUVILLE



WEBB JAY DRIVING THE WHITE STEAM RACER

shines brightly and the air is indeed bracing.

There are indoor amusements to be found; you know your sportsman will always find a way. The hotel is well heated; and they are prepared for occasional cold snaps down here. Remember Ormond is temperate. Palm Beach and Miami only are torrid. Groups cluster around the open fires. There is the click of glasses in the grill rooms and the click of other things having to do with the resourcefulness of the stranded sportsman percolates over the transom of more than one room.

This enforced calling off of the 2 hours of morning racing will put still further back a program already a long way behind schedule. But who cares? One would rather have the racing run over into next week than otherwise. With the Dewar cup race wrangle over everything is at peace, and the racing lions and lambs are lying down together in the orange groves. Temple is a fine fellow and is doing his best. McMurtry, Butler and Mudd are working like beavers at either end of the timing wires and Sam Miles lolls lazily in a tonneau at the finish tape to decide any disputes that may arise.

Everybody here is very much interested in Senator Morgan's new scheme to build a 5-mile race course with a mile straightaway down on Bamegat bay, near Tom's river. The plans of the track and the air castle club house are hanging in lobby, objects of frequent study. Many of the enthusiasts have frequent study. Morgan says he will pull off in May, 1906. They think a lot of the good old senator, they do. They have confidence in him too. Morgan! Irrepressible Morgan! Can you beat him? They haven't yet. They won't.

THE KILOMETRE TRIALS

Ormond, Fla., Jan. 26—Afternoon—Some rattling good races and time trials at the kilometre atoned somewhat this afternoon for the postponement disappointment of the morning. It was cold, to be sure, but the sun shone bright and the air was crisp, clear and exhilarating. The racing being at the Ormond end of the beach, the guests of the Anderson & Price hostilities turned out to see the sport, every man and woman of them.

The shore presented a pretty and animated picture. The foam-capped waves dancing in the sunlight formed the background. The veranda of the Inn was filled with ladies and so was the grandstand on the sand dunes. Twenty-three automobiles were lined up at the finish and as many more stretched down the beach from the starting line. At the mile post a big bonfire was built. The throng about it presented a truly democratic mixture. There were the Duke and Duchess of Manchester and their two children, one to be a countess and the other an earl. Arthur Macdonald was there, too, and so were a coterie of racing men, Florida crackers and coast guard men. All were warming themselves and hobnobbing together most sociably. This automobile racing is certainly a democratic game.

Record trials at a kilometre were first on the card. The results were a bit disappointing, but the wind had gone down and the beach was far from its best.

Arthur Macdonald and the Napier made the best showing, going in 23 seconds flat as against the 21½ seconds record by Baras and the Darracq on the Dourdan course last November.

This is a new American record, supplanting the 26½ seconds made by Basle and the Bowden Mercedes at last year's meet.

Bowden's eight-cylinder, 23½ seconds, and Ross's steamer, 24½ seconds, also beat last year's figure, while S. B. Stevens and E. R. Thomas tied it. The figures in the order of their making were:

W. K. Vanderbilt, Jr., 90-horsepower Mercedes, :28 3-5.

Arthur Macdonald, 90-horsepower Napier, :23. E. R. Thomas, 90-horsepower Mercedes, :26 2-5. Paul Sartori, driving A. G. Vanderbilt's 90-horsepower Fiat, :28 4-5.

Charles Duplos, driving J. S. Heller's 90-horsepower Pipe, :32 3-5.

S. B. Stevens, 90-horsepower Mercedes, :26 2-5. Webb Jay, 15-horsepower White steamer, :32 4-5.

Louis S. Ross, 20-horsepower Ross steamer, :24 1-5.

H. L. Bowden, eight-cylinder 120-horsepower Mercedes, :23 3-5.

Ross' car thus gets the best kilometre record for an American machine and Bowden the best for an American driver. Ross' time is also the world's record for steam cars.

The MOTOR AGE man watched the racing from the top of the sand dunes at the finish. No finer viewpoint could have been chosen. One could see the racers emerge from the throng at the start into the open and sweep down the broad, level stretch of beach and watch every change of position of motor giants in their struggles.

A kilometre for cars from 1,432 to 2,204 pounds was the first race of the afternoon. It was run in three trial heats and a final.

The first heat starters were W. K. Vanderbilt, Jr., Arthur Macdonald and Edward R. Thomas. The green Napier quickly drew away from the Mercedes pair, came down the beach like a runaway locomotive and won by 100



GETTING THE CHRISTIE READY FOR A RACE



BERNIN IN THE RENAULT

yards. The two millionaires had another neck and neck scrap like that of yesterday. Again Vanderbilt beat Thomas by half a length only. Time—MacDonald, :27%; Vanderbilt, :30%; Thomas, :30%.

In the second heat the starters were Louis S. Ross, William Wallace and Charles Duplos. Ross shot away from his rivals like an arrow from the bow and continued his flight down the beach, leaving a trail of steam from the "smoke stack" behind him. Of course he won and won easily by 100 yards. Wallace and Duplos made a fairly good race for half the short journey and then the Bostonian pulled away and beat the Belgian by 100 yards. Time—Ross, :28; Wallace, :33%; Duplos, :38%.

The third heat starters were S. B. Stevens and Paul Sartori. The Roman beat the Italian handily by 75 yards. Time—Stevens, :28; Sartori, :30.

In the final heat the starters were Vanderbilt, MacDonald and Ross. The steamer had the outside next the ocean. Ross got away the quickest, gained a couple of lengths and shot across the Napier's bow into the better going in the middle of the course. MacDonald faltered for an instant. It was his undoing, and the steam tin sneak box beat him 50 yards to the



BOWDEN AND TEMPLE

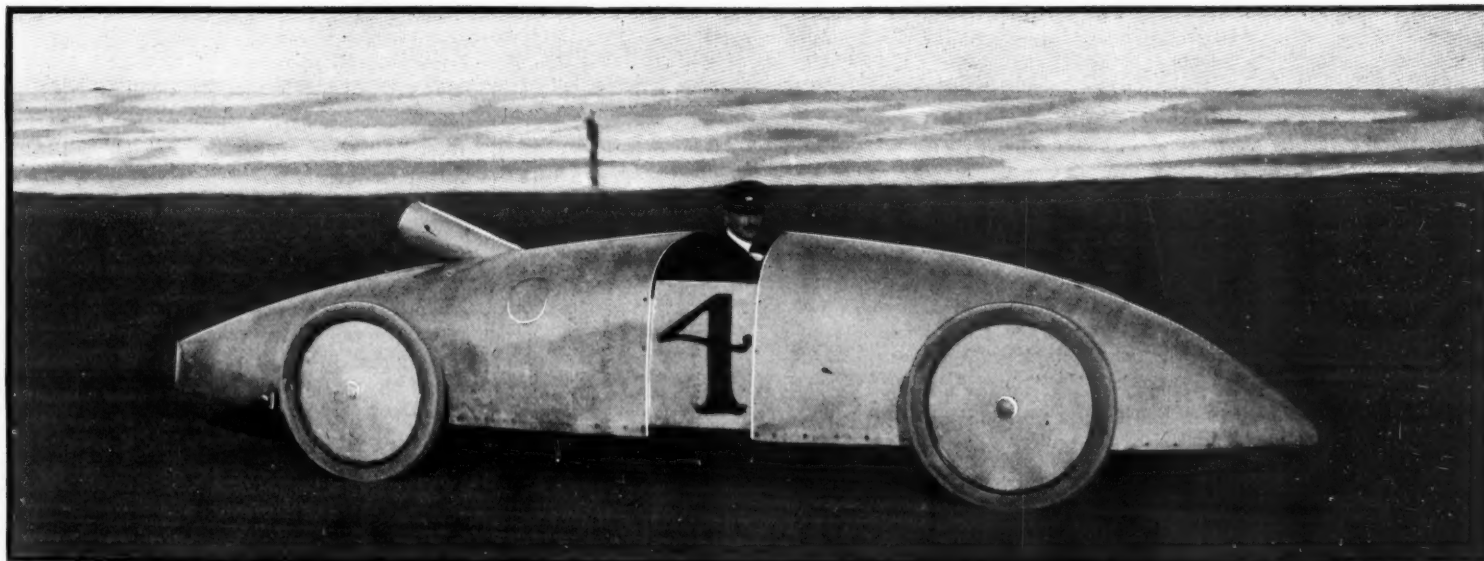
in the third heat the MOTOR AGE negligent correspondent forgot to inform himself. He wasn't in it for a minute, so it matters little. The race was a fierce duel between the two great rivals of the meet so far. Ross got the jump and the middle course at the start and the Napier could not catch the flying steamer, the Yankee beating the Britisher by an open length,

softer sand near the ocean. Half way down the course the Yankee and the Scotchman were running neck and neck and 25 yards to the rear Wallace was lapping Stevens. It was a glorious sprint. The Britisher won by three lengths. Fifty yards back came Stevens, who beat Wallace 40 yards. Time—MacDonald, :27%; Ross, :28%; Stevens, :30.

The 40-horsepower Decauville and the 15-horsepower White steamer, the former piloted by Guy Vaughan and the latter by Webb Jay, fought it out in the mile for cars from 851 to 1,432 pounds. The steamer was utterly too fast for the Frenchman at the sprinting game and won by nearly a hundred yards. Time—White, :51%; Decauville, :54%. It will be noted that the little steamer stock car equalled the original world's mile record made by Henry Fournier over the Coney Island course.

The final of the Corinthian cup race at a mile, owners to drive, carried over from yesterday, had for starters Ross, Stevens and Wallace. They finished in this order with gaps of 150 and 50 yards between: Time—Ross, :41%; Stevens, :46%; Wallace, :47%.

But one heat of the mile open for cars from 1,432 to 2,204 pounds was run today. The starters and order of the finish were: Ross,



ARTHUR ROSS IN HIS SPEEDY STEAMER

tape. Stevens was 100 yards further back. It looked very much like a foul by Ross, but the Britisher refused to claim it, saying that the swerve was probably due to what he pronounced the steamer's rather unreliable steering apparatus. Time—Ross, :27%; MacDonald, :29%; Vanderbilt, :32%. In throwing on his fourth speed Vanderbilt stripped his gears. This put him out of the running for the meet and he left for Palm Beach tonight. The popular young sportsman has had poor luck and little success. All wished him well and are outspoken in their regrets at his failure to carry away some of the honors and prizes.

Another kilometre race followed. It was for the H. L. Bowden trophy and open to all. The first heat starters were William Wallace and E. H. Fredericks, driving B. M. Stanley, Jr.'s, 90-horsepower Mercedes. The Fiat beat last year's mile record holder by 50 yards. Time—Wallace, :32%; Fredericks, :34%.

Second heat starters: S. B. Stevens and Paul Sartori. Again the Roman beat the Italian. This time the win was by 100 yards. Time—Stevens, :31%; Sartori, :34.

Third heat starters: Ross, MacDonald and Stevens. Just why Stevens was started again

with Stevens 50 yards back. Time—Ross, :29%; MacDonald, :29%; Stevens, :31%.

Final heat starters: Ross, Stevens, MacDonald and Wallace. This was a race for blood and all around the most hotly contested of the meet to date. This time Ross failed to get his usual jump and had to do his running in the

Stevens, Wallace, Sartori. Time—Ross, :42; Stevens, :45%; Wallace, :47%. Sartori finished 50 yards to the rear.

Several official time trials were allowed during the afternoon, with the following results: Electric Vehicle Co.'s 18-horsepower Columbia, 1:22.

John Casewell, 35-horsepower Columbia, 1:27.

Charles Soules, 30-horsepower Pope-Toledo, :57.

The sprints are now about over and it looks as though Ross had reached the end of his prize winning.

It was expected that Henry Ford would be able to give his new car a private trial this afternoon, but he could not get it together in time and is working on it tonight for a daylight tryout tomorrow.

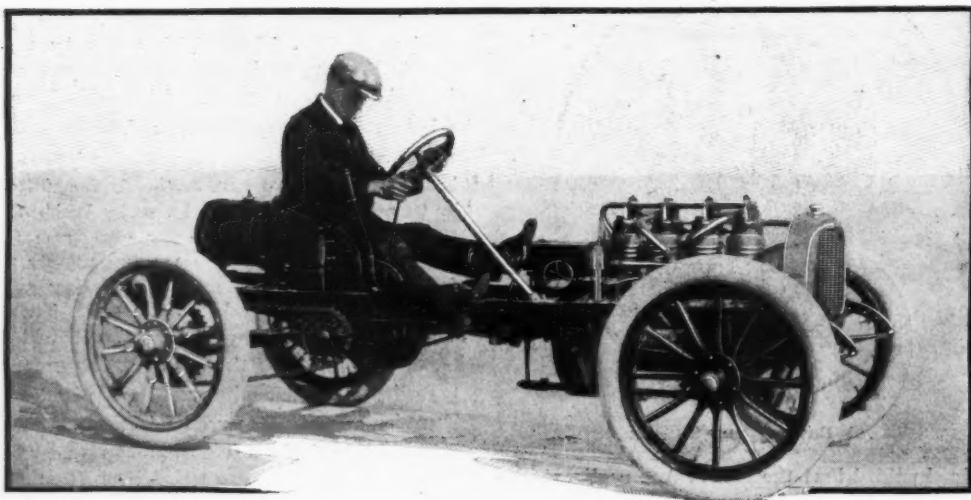
Sir Thomas Dewar, who has won great popularity here, left tonight for Palm Beach and Miami.

Before he went he was summoned to the hotel lobby. S. A. Miles introduced him and then a MOTOR AGE man on behalf of some of the friends of Sir Thomas presented him with a gold medal as a souvenir. It was struck from the Dewar cup die. The automobile baronet replied in his usual happy vein and was loudly cheered.



MRS. A. L. RIKER

MEDIOCRE MATCH RACING



A STRIPPED POPE-TOLEDO

Ormond, Fla., Jan. 27—Morning—The 50-mile race for the Lozier trophy, which was limited to American cars, was the early morning event set for today. It had three starters—A. C. Webb, 90-horsepower Pope-Toledo; Walter Christie, 60-horsepower Christie, and Barney Oldfield, 60-horsepower Peerless Green Dragon. They were started from Ormond at minute intervals in the order named and were to make 12½-mile runs up and down the beach until 50 miles were covered. A 2-minute control was set for each turn.

Ample time had elapsed for the racers to reach the turn and still no word came from Daytona even of the cars being in sight. Twenty minutes later Barney Oldfield appeared racing up the beach and arrived at the start in 24:00½. He had turned by mistake at the 10-mile post and this was his gross time. He had actually taken 22:00½ to cover the two 10-mile stretches from standing starts each time.

"I saw an official car and bunch of officials," said Barney, "and supposed, of course, it was the turning point; so I stopped, took my place on the line and waited until the 2 minutes were up by the watch I had strapped on my knee. I passed Webb and Christie tinkering with their cars in the soft sand, the one 5 and the other 6 miles down the course."

It transpired that the officials referred to by Oldfield were engaged in setting the wires for two 10-mile races scheduled to be run this morning. The Pope-Toledo had a broken commutator. Christie thought he had a broken trembler, but after a long search found he was short circuited.

The officials at the start were now in a quandry as to how to unravel the Oldfield error. It was decided that Barney should make a fresh start and he was accordingly sent away. Before reaching the turn Oldfield lost the righthand rear tire, but continued on the tireless rim. He got to the Daytona turn in 17:39 and completed the round trip in 35:43. A minute or so after Oldfield reached the starting point again, Christie, having located and abated his trouble, came sailing up the beach and across the line. With two competitors in the running it was promptly and properly ruled that the race was now on from the original start and that Oldfield had completed but one lap. While Barney was leisurely taking on gasoline Christie got away again after 2 minutes' control wait on his second round. Barney hurriedly mounted and set out on a

hopeless chase with his three-tired racer.

All this time the unfriendly, merciless tide was rising. Christie kept gamely on, though once he got in the surf and in turning sharply into the soft sand nearly upset. When he finished he was wet with ocean brine and nearly blinded with sand, for his goggles had slipped down. His total net time for the 50 miles, including his long wait occasioned by the short circuit, was 1:11:20½. Christie covered the last 25 miles, despite the waves, sand and soft going, in 22:46½. The run down to Ormond with the wind on a fair beach was made in 10:11½.

The tide was now too high for the Hollander & Tangeman and Allen, Halle & Co. cup races for Mercedes and Fiat cars, both at 10 miles, to be run off.

AT THE DAYTONA END

Ormond, Fla., Jan. 27—Afternoon—Had it not been for a hastily-arranged match race between a 40-horsepower special Leon Bollee touring car, owned by Isaac E. Emerson, of Baltimore, and the veteran 40-horsepower Decauville racer of the Standard Automobile Co. of New York the afternoon schedule set to be run today at Daytona would have been an utter fizzle.

In the first place a strong inshore wind would not let the tide recede normally. After a long wait, however, a strip of possible racing beach showed; but after Rollin White, who had at last received new chains and was ready for the fray with the new White racer, Macdonald,

Stevens, Wallace, Thomas and others of the entrants for the Brokaw trophy had taken trial spins over the course they pronounced it not only unfit for racing but also so lumpy as to be unsafe. They accordingly refused to start and another half day went to the bow-wows or would have gone utterly to the board had it not been for the Decauville-Bollee match.

Mr. Emerson was confident that his Bollee could beat any 40-horsepower car on the beach and had \$500 to back his opinion. Guy Vaughan was at hand with the Decauville. There was a rush for E. S. Partridge by the knowing ones and offers were plentiful to take a piece of what was considered so good a thing. A hastily organized syndicate covered the good Baltimore sportsman's \$500 in a jiffy. It was agreed that the race should be at 10 miles—5 miles down and 5 miles back—with a 2-minute control at the turn.

R. Magondeaux was at the wheel of the Bollee. Guy Vaughan, of course, piloted the Decauville. They got away even. It was soon evident that after all Partridge had caught a Tartar. As the pair vanished in the undistinguishable distance they were racing side by side, with the Bollee nearest to the ocean and consequently having a bit the worst of the going. Word was phoned from the turn that Vaughan had reached there in 4:20½, with a short lead of five lengths. There was now no little excitement—your American loves a race for money—and eyes were strained down the beach just as one looks for the shells down the river in a 4-mile eight-oared boat race. Just like the distant boats, two low-lying objects could soon be distinguished creeping nearer along by the waves. Next one of them came into sight and then another and behind them a string of pursuers watching the exciting contest from the rear in racing cars. A minute more and the white of the Decauville was plainly seen in front. Vaughan won in 9:25½, net. The Frenchman finished a bit over 100 yards further back in 9:29½. It was a good race and redeemed the day. A live management would have added much interest by the promotion of more of these matches.

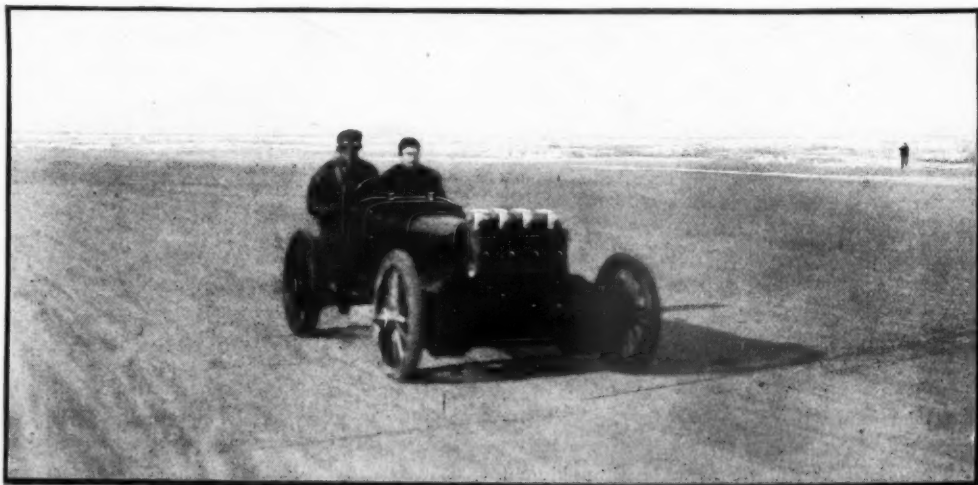
During the afternoon Henry Ford passed the club house with his new six-cylinder racer. It was moving swiftly and smoothly and Ford got a hearty cheer.

"Further down the beach," said he when he returned to the hotel, "I let her out."

"Can she break the record?"

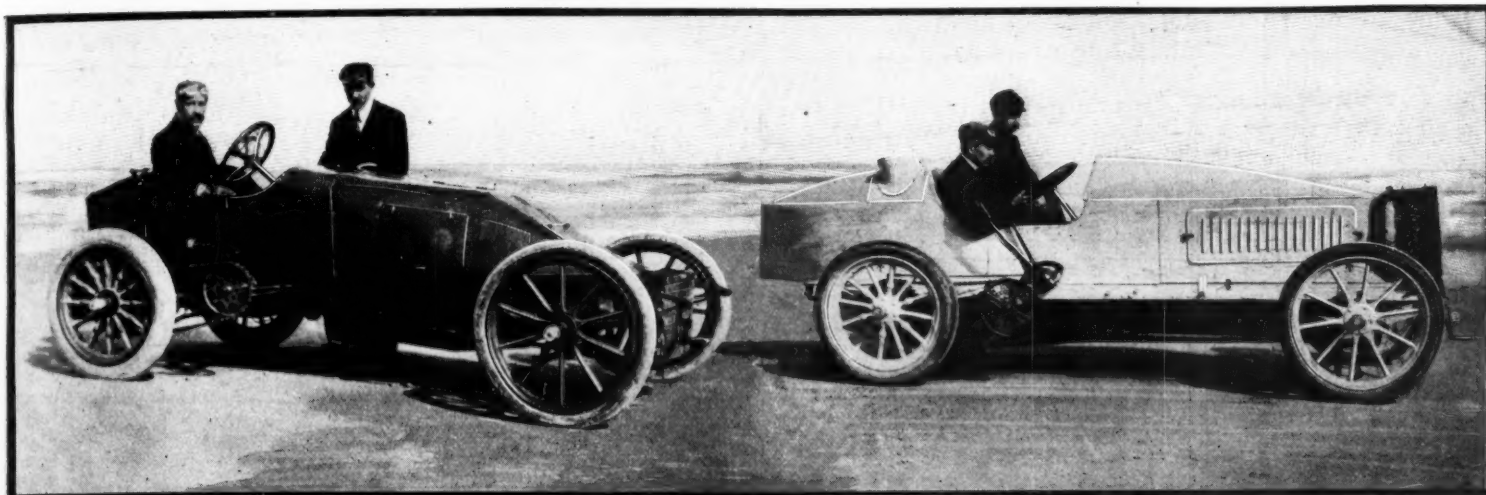
"Sure she can," he replied with a confident smile.

He is promised a trial on Tuesday. All are willing to wait for it, for all feel it in their bones that there will be something big doing.



WALTER CHRISTIE WITH HIS FRONT-DRIVEN CAR

ALL KINDS OF SENSATIONS



DUPLOS DRIVING THE PIPE

FLETCHER IN THE DE DIETRICH

Ormond, Fla., Jan. 21—Sensation followed sensation to-night. As one pessimistic extremist put it, disintegration not only of the A. A. A., but also of the racing board seemed to have set in. It may not be quite so bad as that, but at this end of the line chaotic conditions prevail, both as regards the leadership of the A. A. A. and also in the racing board.

In the first place, in fulfillment of certain promises made on the occasion of his re-election, based on contingencies which eventuated here, Harlan W. Whipple handed in his resignation as president to Secretary Gillette. What those promises and contingencies were are known to insiders. It were better that they receive no further publicity than a mere reference. The resignation of W. C. Temple as chairman and William K. Vanderbilt, Jr., H. L. Bowden and William Wallace followed. Mr. Vanderbilt had openly expressed his disgust at the mismanagement of the meet, and left for Palm Beach. It was said Mr. Temple, Mr. Bowden and Mr. Wallace regarded themselves as personal appointees of President Whipple, and in honor bound to retire with him. It is no secret, though, that Mr. Bowden and Mr. Wallace were not overpleased with the way things were running. Mr. Temple's appointment as chairman was said to have been merely temporary. He is probably glad of the excuse to retire.

With the abdication of Mr. Temple there was talk at once of the probability and the desirability of the return to office of A. R. Pardington, the former chairman. It was a very generally expressed opinion that he alone had a living chance through his diplomacy, general popularity and knowledge of the racing game of keeping the A. A. A. racing board from losing all prestige, and, in fact, recognition as a controlling factor in racing. It was argued that Mr. Whipple's retirement made it possible for Pardington to return once more, and that he alone could prevent the mentioned and almost threatened formation of a matinee racing association, made up of the tracks, the promoting clubs and the new Ormond Racing Association, deemed certain to be formed before the tournament was over. His able handling of the details of the Vanderbilt cup race were pointed out by way of an assurance of satisfactory management here had he been in command. As a matter of fact, it is a good guess that he will be asked to again take the chairmanship. Not another name

is mentioned and Messrs. Vanderbilt, Bowden and Wallace are known to be friendly to him and would probably consent to return to the racing board were he again made the leader.

It is understood that William Wallace has the A. A. A. presidential bee in his bonnet, and, in fact, it is said that a telegraphic vote to put him in the chair was set under way to-night. W. C. Temple is also mentioned as a possible successor.

It is very generally remarked that if the racing board goes to pieces the A. A. A. will collapse along with it. The solution suggested is that the movement be renewed for the amalgamation of the A. A. A. and the A. M. L., if the latter will consent to reopen negotiations in view of the bad faith shown by the A. A. A. executive committee in making impossible demands so as to defeat the consolidation voted for by its members and those of the A. M. L. On the other hand, the suggestion is made that the A. M. L. at once turn its attention to the recruiting of the clubs and carrying out of the original A. A. A.-A. M. L. amalgamation plan of an organization of clubs and individuals.

"It is too early," said one prominent automobilist of the group of notables discussing the situation, "to have an organization in which the clubs for the present shall not be prominent factors. Their membership would be of value in itself and also in drawing into the fold thousands of individuals."

When the southern circuit and the Chicago show are over it is expected that the situation will be faced and something radical be doing. At present there is disintegration in the A. A. A. and its racing board, and chaos and threats and plans galore on the outside.

THE TEN-MILE SPRINTING

Ormond, Fla., Jan. 28—Morning—There were many to regret having abandoned in disgust and weariness the early rising habit today—those who had missed some good 10-mile racing on the beach between Ormond and Daytona. They missed, too, seeing that good all-around sportsman, Edward R. Thomas, at the wheel of his 90-horsepower Mercedes give the 10-mile record of 6:50 made by Vanderbilt last year a bad beating.

Father Time got his licking at the hands of the young millionaire turfman and automobilist in the 10-mile race for Mercedes

cars for a cup given by Allen, Halle & Co. In this race Thomas, Stevens and Stanley—Pat Egan driver—piloted 90's and Breese a 35. Thomas was in as fine form as his car and made a runaway of the race, scoring 6:31 4-5, a 39-second average for the mile, or 92.3 miles to the hour. The Shanley car, which it may be mentioned, was the record holder itself, was second in 7:44 1-5. Breese was third in 9:25 4-5. Stevens stopped at the 5-mile post. He has cracked a cylinder and is out of the racing now altogether.

William Wallace made a runaway of the 10-mile race for the Hollander & Tangeman cup. His time was 6:54 2-5, very close to the record at the hour he ran his race. Sartori had trouble with his clutch, was badly beaten and was not timed.

To save time the trial heats in the Ormond derby at 10 miles were run up the beach. Incidentally the racers had to buck a gentle wind, which, however, was strong enough to slow the time considerably.

The results follow:

First heat—Arthur MacDonald, 90-horsepower Napier, first; time, 7:06. Charles Duplos, driving J. S. Heller's 90-horsepower Pipe, second; time, 7:40 2-5. M. G. Bernin, driving W. G. Prokaw's 60-horsepower Renault, third; time, 7:59 2-5.

Second heat—E. R. Thomas, 90-horsepower Mercedes, 7:10 3-5. Pat Egan, driving B. M. Shanley, Jr.'s, 90-horsepower Mercedes, second; time not taken.

Third heat—James L. Breese, 35-horsepower Mercedes, first; time, 10:29 2-5. William Wallace, 90-horsepower Fiat, second; time not taken.

Again the tide stopped further racing for the day and there will be nothing doing but enjoying the charms of Ormond and its surroundings in the beautiful balmy weather that has returned to us, until Monday, when the Vanderbilt cup race will be run.

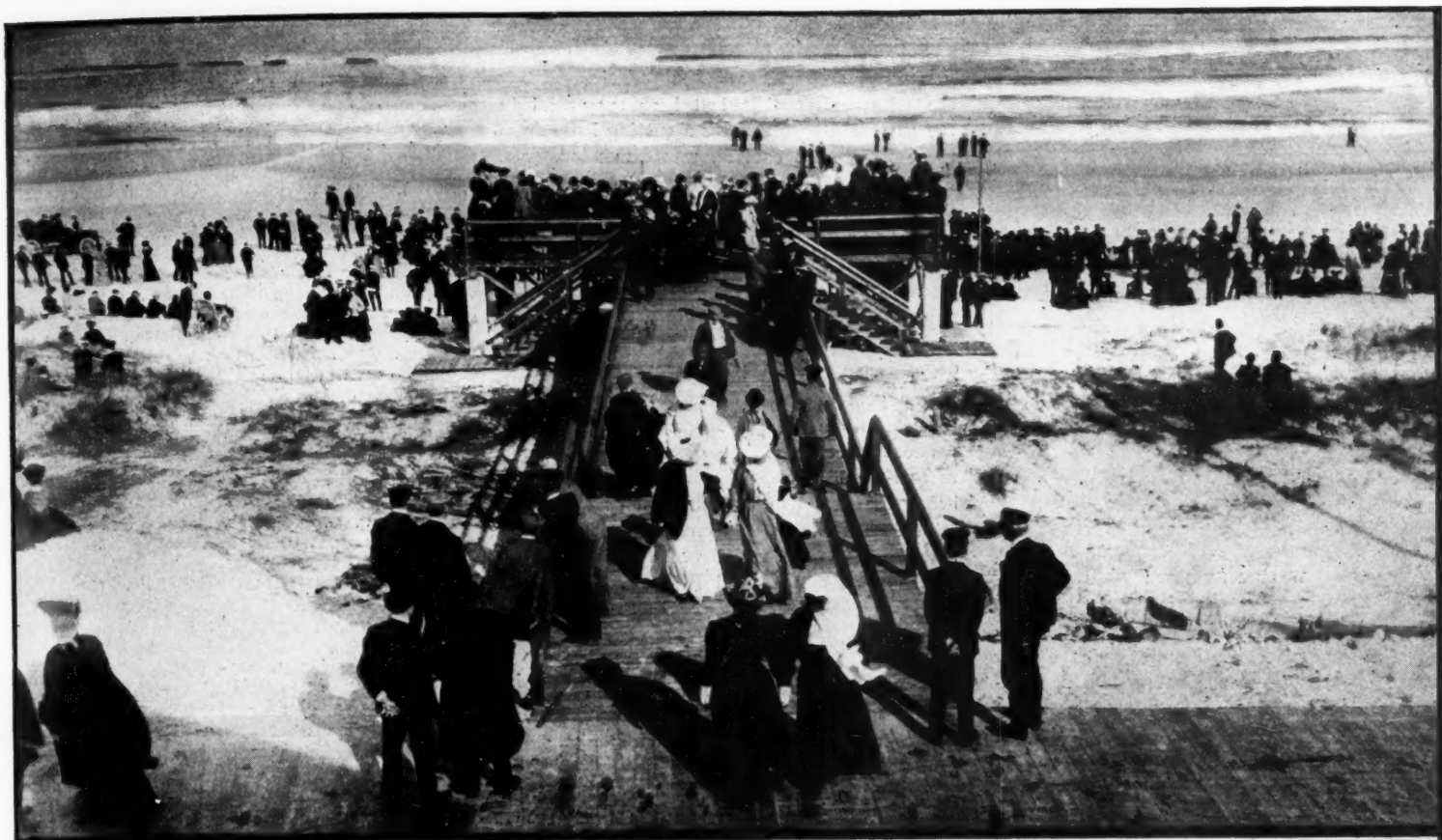
One p. m.—At this writing word has just come that the crank shaft of the Ford racer has been broken. The report is that there is no substitute at hand and that Ford is down and out of it so far as the mile record goes unless he waits after the meet for a new one and makes the trial if he can arrange for the timing. There is no time for your correspondent to investigate and send further particulars before this mail closes. There is, however, general disappointment over this unfortunate accident, for Americans had pinned their faith on the latest creation of the Detroit who has always turned out something that had extreme speed.



AN INCIDENT OF A RIDE TO THE BEACH

CARS LINING UP BEFORE THE RACES
TYPICAL FLORIDA SCENERY AS FOUND BY AN EXCURSION INTO TERRITORY BACK OF ORMOND

TOWING THE PIPE RACER TO THE BEACH



ON THE PIER AT THE ORMOND END OF THE BEACH

MACDONALD AT FULL SPEED—CHARACTERISTIC VIEW OF THE COURSE

NEW ASSOCIATION FORMED



WALTER CHRISTIE

Ormond, Fla., Jan. 28—General dissatisfaction with the conduct of the meet and the utter failure of the American Automobile Association's racing board, with the almost exclusive assistance of the Daytona members of the Florida East Coast Automobile Association, added to the connection that in practically deposing Senator Morgan, who instituted the Florida beach tournaments and conducted their racing details with complete satisfaction to competitors, visitors and members of the press for 2 years, the substitution had been to the injury of, and to the peril of future contests on the Ormond-Daytona beach, a conference of Ormond citizens, men prominent in automobile club and racing circles, and writers on motoring in the daily and weekly trade press, was held here to-night, resulting in the formation of a new body to conduct the annual races on the beach, to which was given the name Ormond Racing Association.

The whole situation and the conduct of the meet was freely discussed by Ormond residents, men having the interest of the sport and industry at heart, and newspaper men prominent as writers on automobiling for the daily and weekly press.

The discussion was frank and fearless, and words were not minced in condemnation of the inefficiency of this year's management of the tournament, for which neither tide nor weather was granted to be a sufficient excuse. Honorable and praiseworthy exception was made of the efficient work done by A. L. McMurtry, inventor of the timing apparatus used, and Frank X. Mudd, of Chicago, and S. M. Butler, his assistants in the operation of the engineering and accurate timing device employed.

Charles H. Hyde, president of the New York Motor Club; S. A. Miles, general manager of the N. A. A. M., and F. X. Mudd, voiced the sentiments of the followers of the racing game. John Anderson, J. A. Bostrom and James Carnell spoke for the Ormond residents. Alfred Reeves, manager of the Empire City track meets, enlarged on the inexcusable failure of the present management. A. G. Batchelder, John Hemment and John C. Wetmore told the meeting that the newspaper men had only the interests of the sport at heart, wanted no part in the management, resented the unfair and unwise treatment that have been accorded Senator Morgan, and stated the opinion of the press to be practically unanimous that if the tournaments were to be continued a return to

the management that had been successful in the past, and by all means a cutting loose from those in present control, was demanded. Mr. Batchelder then, on behalf of the press, said the newspaper men having expressed their opinions preferred to retire and leave the gentlemen directly interested to an executive conference. It was insisted, however, that the newspaper men remain, which they did, but took no further part in the proceedings of the day.

The general trend of opinion was that an association should be formed, that an independent meet should be given, and that the races should be run at whichever end of the beach the best course conditions could be obtained. There was, of course, complaint made that Ormond sojourners, which included most of the prize donors, and most of the contestants, should have been compelled most of the time to make needless 12-mile round trips to Daytona to satisfy the spite of the A. A. A. and F. E. C. A. A. combination against Senator Morgan and his Ormond supporters. It was charged that there was no boss, no head to the management, to whom one could go for a decision or information, and that the assistants employed in subordinate positions were utterly inefficient, in marked contrast to the experienced officials appointed by Senator Morgan, who had run things somewhat and satisfactorily in the past, but this year had been turned down by the A. A. A. racing board and the Daytona club.

C. H. Hyde, of New York, and John C. Kerrison, of Boston, acted as temporary chairman and secretary of the meeting. When the conference got down to business it passed the following resolution unanimously:

Resolved, That the meeting proceed to elect by ballot a committee of nine persons, of whom not fewer than five shall be residents of Ormond, who shall constitute a board of directors, and whose duty it shall be to adopt a constitution, elect officers, act upon applications for membership and conduct the affairs of the association until such time as a further general meeting shall be held, the date of such meeting to be not later than February, 1906.

The following gentlemen were nominated as members of the committee: James Carnell, J. A. Bostrom, J. D. Price, W. S. Kenney and Dr. William Miller, of Ormond; Frank X. Mudd, of Chicago; H. L. Bowden, of Boston, and W. J. Morgan and S. A. Miles, New York. They were elected unanimously. The meeting then adjourned.

The directors then met in executive session. The official report of their proceedings follows:

Ormond, Fla., Jan. 28, 1905—A meeting of the directors of the Ormond Racing Association was held at the Hotel Ormond at 10:30 o'clock p. m. this day. There were present Messrs. J. D. Price, James Carnell, J. A. Bostrom, Dr. William Miller, William S. Kenney, W. J. Morgan, Frank X. Mudd and S. A. Miles. Mr. Mudd was elected temporary chairman and Mr. Miles temporary secretary. Upon motion of Mr. Kenney, seconded by Mr. Bostrom, the following constitution was adopted by unanimous vote:

The name of this organization shall be the Ormond Racing Association.

Its objects shall be the promotion of automobile, motor boat and motor cycle racing and other sports at Ormond, Fla., and the promotion of good fellowship among motorists.

Any person interested in automobile, motor boat or motor cycle racing or other similar sports, in good standing, shall be eligible to membership. Applications for membership shall be passed upon by the membership committee.

There shall be no initiation fee. The dues shall be \$12 per annum, payable at the time application for membership is made and on the first day of January of each year thereafter.

There shall be a board of directors of nine members, to be elected at the annual meeting the date of which shall be decided by the directors, and of which not less than 10 days' notice shall be given to members.

The officers shall be a president, vice-president, secretary, treasurer and general manager, who, except the general manager, shall be elected to the directors from among their number.

There shall be standing committees on membership and racing and such special committees as the directors may from time to time deem necessary.

This constitution may be amended by a two-thirds vote of the members present at any meeting of which 30 days' notice, stating the nature of the proposed amendment, shall have been given. All matters not specifically covered herein shall be subject to the decision of the directors.

The following officers were elected in due form: President, J. D. Price; vice-president, James Carnell; secretary, William S. Kenney; treasurer, J. A. Bostrom.

The president then took the chair. On motion of Mr. Carnell, seconded by Mr. Bostrom, W. J. Morgan was elected general manager to serve until February, 1906.

Mr. Miles moved that the five directors resident at Ormond constitute the membership committee, with power to elect or reject applicants. The motion was seconded by Mr. Mudd and carried unanimously.

On motion of Mr. Carnell, seconded by Mr. Bostrom, the president was empowered to appoint the racing committee of five members. Mr. Mudd moved and Mr. Carnell seconded the motion that Frank Bond be elected an honorary member; carried.

Mr. Miles moved and Mr. Morgan seconded that the Ormond members of the board investigate the desirability of petitioning the proper authorities to have the beach declared a public road and that they be empowered to take such action in the matter as they may deem advisable; carried.

On motion of Mr. Morgan, seconded by Mr. Mudd, the president and secretary were empowered to incorporate the association.

On motion of Mr. Mudd, seconded by Mr. Morgan, the president, vice-president and secretary were constituted a finance committee, and the treasurer was instructed to disburse the funds only on their order.

H. M. Flagler has announced his intention of building at Ormond a 2-mile track for bicycle, motorcycle and automobile racing and for use for other outdoor sports. The new Ormond Racing Association will promote these tournaments.

A New York reporter of notorious enmity to Senator Morgan, for the purposes of belittling and casting ridicule on the new association, met with three or four of his friends in the grill room to-night and formed a Seabreeze Racing Association. This is mentioned merely that MOTOR AGE readers may understand any possible references to a Seabreeze association they may see in print.



ARTHUR MACDONALD

A SUNNY SOUTHERN SUNDAY

Ormond, Fla., Jan. 29—It is Sunday and an ideal June day Sunday it has been. They tell us this is Ormond under normal winter conditions. If so, we northerners and westerners are certainly exiles from a land of sunshine and of promise. The newspaper men today have treated themselves to the first holiday many have had since days and even weeks before the New York show opened. Many of them are working in their rooms to-night to pay for it, as the MOTOR AGE man is. It has been mighty hard for us boys to resist the temptation of the social pleasures of the hotels at night, and the many possible excursions on the beach, on the river and through the Florida jungle, which high tides and racing lapses would otherwise have permitted.

The contrast between the crowds of last week and a hotel but three-quarters filled today is noticeable. Visitors began to leave as early as Thursday in disgust at the way they were being treated by the weather clerk, the tide and the management of the races. Friday saw more leaving and Saturday's outgoing trains were crowded. Of course, most of the visitors had only calculated on a week here. Platform cars bearing automobiles have been going out with every freight train. Fully fifty touring cars were brought down here for the use of their owners on the beach during the meet. The race home among them, which has resulted in the beach being filled with scurrying cars after the last race has been finished, and the whirring by of the great racing machines, have been one of the sights of the week. It reminded one of the race back to town that always follows a Washington park or Empire City meet, though this all around contest of a hundred cars all in view at one time on the magnificent broad beach course has been far more novel and inspiring.

There has been a notable exodus also of racing cars. Most notable and regrettable among the departures has been that of the new Ford racing machine, interest in whose possible breaking of the mile record has been almost the only sensational event left in anticipation. It broke a crank shaft in practice on Friday and was down and out for good at this long distance from factory or repair shop.

Vanderbilt's, Stevens' and Sartori's cars have all gone, owing to one trouble or another. The Bennett Pope-Toledo broke its commutator in the 50-mile race for American cars and has had other troubles. Albert L. Pope, anyhow, was disgusted at the way things were going here and ordered the machine sent home.

The racing chances in to-morrow's Vanderbilt 100-mile cup race and the other 5, 10, 20 and 50-mile contests not yet finished seem to be solely among Arthur MacDonald, Napier; Louis S. Ross, Ross steamer; E. R. Thomas, Mercedes, and Rollin H. White, white steamer. MacDonald is a prime favorite. Thomas, in view of his 10-mile record yesterday, seems to have gotten his racer at last keyed up to proper pitch, and is proving a skillful pilot. Ross hints that he may astonish some folks in the longer races. He has sold the "sneak box," by the way, to Charles Heineman, the bookmaker. It will be campaigned this season at the track meets and exhibitions under the management of F. E. Spooner, with Joe Nel-



FRANK MUDD ON THE TIMING CIRCUIT

son, the cycle-pace follower, as its pilot. At last Rollin White has received chains for his new steam flyer, which, through lack of them, has not yet been able to compete.

Races are scheduled for to-morrow and Tuesday, when it is hoped and expected that the long program will be brought to an end. Tuesday night followers of the southern circuit—there promises to be fully a score of them to go all the way through to Havana—will leave for Palm Beach, where there will be motor boat racing on Wednesday, Thursday and Friday, and at Miami on Saturday. On Sunday night the Cuban invaders will sail for Havana, to carry out a 4-days' program arranged to conclude the following Sunday. Some of the newspaper men and race followers are planning to visit Nassau before returning, so that it will be not far from 3 weeks before all the circuit chasers are back at their desks and homes.

Chairman Temple, of the racing board, gave a breakfast at the Ormond hotel at 11 o'clock this morning to the meet officials, contestants and newspaper men. There were, however, but two of the latter present, as the boys had no other day for their annual excursion up the Tomoka river as the guests of Anderson & Price.

There were between forty and fifty present at the luncheon, including E. R. Thomas, H. L. Bowden, Walter Christie, C. H. Gillette, S. M. Butler, S. A. Miles, William Wallace, Arthur MacDonald, A. L. McMurtry and Colonel Goddard. The table decorations consisted of oranges, tangerines and other tropical fruits. The walls were decked with palms and palmetto. The host, in greeting his guests, told of the troubles the officials had had by reason of the tide and bad weather, and maintained that everything had been done that could be done to put through the program promptly.

Arthur MacDonald said he was very much pleased with his reception here and that he hoped to come over next year with even a faster and better Napier.

E. R. Thomas, who has won much popularity here by his thorough sportsmanship, declared that the circulation of the Morning Telegraph, the metropolitan sporting daily, had increased by its Ormond news stand sales from five to seven since he made a world's record. Messrs. Wallace, Goddard, Christie and Bowden also delivered themselves of after-breakfast speeches in a happy vein.

The newspaper men, who went on the To-

moka excursion, declared the event marked a red-letter day in their lives. It was an entirely novel experience to most of them. All save three, who remained behind for work and the Temple luncheon, were in the party. Among them were Batchelder, of Motor and the New York American; Spooner, of the World, Globe, earth, Times, Horseless Age, Morning Telegraph, and all the other papers not covered by the bunch; Reeves, of the Automobile; Kerrison, of the Boston Herald; Reynolds, of the Boston Post; Kettle, of the A. P. and Florida Times-Union; Hastings, photographer of Motor; Lazarnick, photographer of MOTOR AGE; Wetmore, of New York Mail and MOTOR AGE, and Harrison of the New York Tribune. There were ladies and other guests, too, to the number of sixty or more.

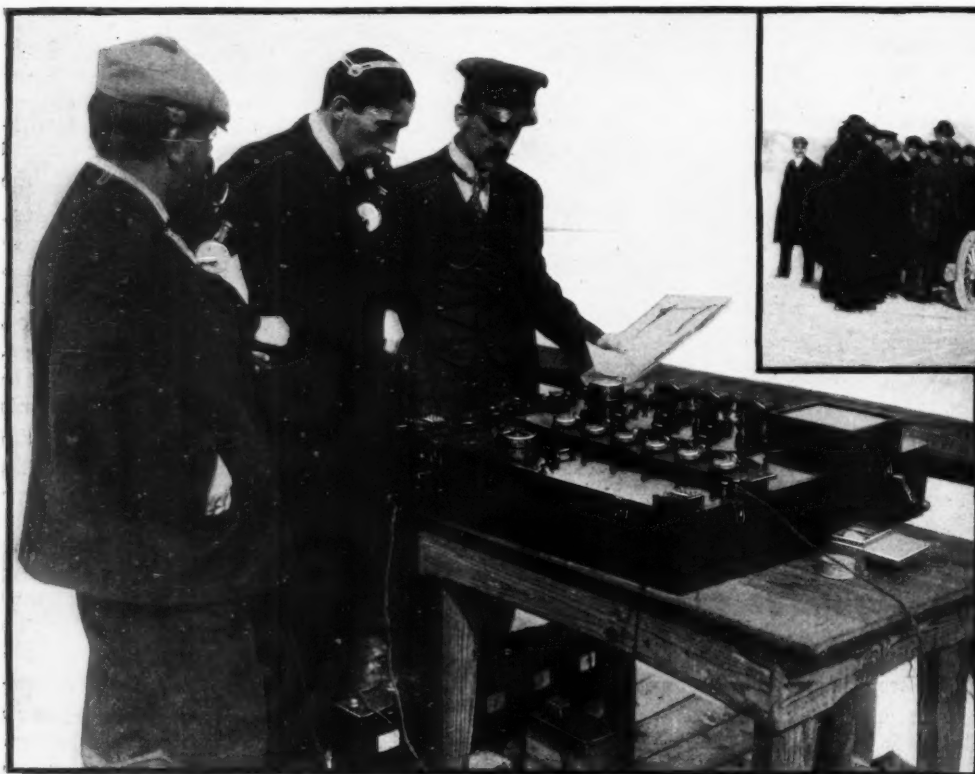
The course was up the Halifax river and then west into the Tomoka. Here the real tropical scenery began. At first one saw palms on the one hand and meadows on the other. As the boat proceeded up stream, however, the river narrowed into a creek so narrow that the great oaks with hanging moss and the palms met almost in an arch above. As the stream grew narrower its course became more tortuous. At times the deck would brush the palms and one would have to duck his head to avoid the low-hanging branches. Still, the anticipation of such a change, though well sprinkled with work, is a stimulant such as no doctor or pill-maker can prescribe for the pencil-pusher.

The Princess Issena went up stream to a narrow bend, where was located a rustic "camp." Here the boat was backed and poled around for the home trip. At the bow stood a negro with a pole to push around the bow or ward off collision with the trees. Both coming and going the houseboat Uncle Sam, with a crowd of chauffeurs, mostly French, aboard was passed. There were greeting cheers from both boats. Songs were sung much of the way, the old southern melodies not being forgotten. "Dixie" was chorused with enthusiasm, and then some one waved an American flag and the whole boatful sang "The Star-Spangled Banner." It was too cool for alligators, and the rubber ones were having a Sunday off.

On the way back the excursionists landed at the Anderson & Price camp. Here a luncheon, which was served a la fresco under the trees, was waiting. After a jolly midday meal the party climbed into tally-hos and carriages and were driven through the hammock land, a tropical jungle, back to the hotel, 6 miles distant. Lazarnick took some pictures, which will, no doubt, give MOTOR AGE readers in some future issue an idea of the characteristics of the scenery encountered in one of the most memorable boat and coach rides of our lives. And you wonder we can stand the drudgery of the show with such pleasures ahead of us as these and more to come further south?

Millions of water fowl and forest birds were put out by the boat, only to return a moment later. How those birds have been envied by the newspapermen—no blizzards to worry them and nothing to do but hunt for grub. A trip like this is novel, at least to a northerner, and one could not be blamed for wishing to spend a couple of months exploring such a charming spot.

THE FASTEST CENTURY EVER MADE



BUTLER, MCMURTRY AND KERRISON AT THE MCMURTRY TIMING DEVICE AT THE STARTING LINE

Ormond, Fla., Jan. 30—Special Telegram—H. W. Fletcher, piloting the 80-horsepower de Dietrich which Gabriel drove in the Vanderbilt road race on Long Island October last, was the winner today of the trophy given by the same W. K. Vanderbilt, Jr., for a hundred-mile race on the world's greatest speedway. The race was run with seven turns and without controls. Fletcher's time was 1 hour 18 minutes 24 seconds, a rate of 76.7 miles per hour, the fastest average a car has ever maintained over a course reaching three figures of mileage in the history of automobile racing.

There were ten starters. Six of them finished and the last survivor's average rate of going was 66.6 miles per hour. The previous American road record of 2 hours 52 minutes made by Emile Voigt in a Panhard on Long Island on April 26, 1902, was more than cut in half. To give one an idea of the terrific speed maintained by the winner, who led from 16 miles and perhaps before to the finish, one need compare his time for 60 miles, which was 47 minutes 20 seconds, with the American record of H. S. Harkness, of 1 hour 12 minutes 40% seconds. The winning car is the property of S. B. Stevens, of Lyons, N. Y., a former business partner of E. R. Thomas, also a contender at the tournament. It had not previously completed the meet, having probably been

saved as a big surprise for this one race.

Maurice G. Bernin, driving W. Gould Brokaw's 60-horsepower Renault, which won the Eagle Rock climb last Thanksgiving day, was second in 1 hour 28 minutes 31 seconds. Alfred Gwynn Vanderbilt's 90-horsepower Fiat, piloted by Paul Sartori, was third in 1 hour 21 minutes 44% seconds.

The race started from 4 miles south of Daytona at 8:53 o'clock this morning and after three turns at 16 miles and four at the 2-mile post finished at the club house near the 10-mile post, the posts being numbered from the south. There were no controls, the racers making the right about turns as best they could. It was poor turning at Ormond, but good at Mosquito lighthouse.

The contestants were sent away in the following order at minute intervals: Arthur MacDonald, 100-horsepower Napier; B. M.



STARTING OLDFIELD AT A CONTROL

Shanley, Jr.'s., 90-horsepower Mercedes: E. H. Fredericks, driving W. Gould Brokaw's 60-horsepower Renault; M. G. Bernin in A. G. Vanderbilt's 90-horsepower Fiat; Paul Sartori, driving William Wallace's 90-horsepower Fiat; J. S. Heller, 90-horsepower Pipe; Charles Duplos, driving S. B. Stevens' 90-horsepower Mercedes; Walter Christie, 60-horsepower Christie; R. E. Jarriges' 45-horsepower de Dietrich with Charles Canaut driving; S. B. Stevens' 80-horsepower de Dietrich with H. W. Fletcher driving.

With minute intervals of start there were naturally no changes in position before the racers reached the club house, 4 miles on their way north. They covered this stretch in the following times and order, based on actual time scored: Stevens, 3:46; MacDonald, 3:47%; Fletcher, 3:50; Duplos, 3:59%; Fredericks, 4:00; Bernin, 4:00; Sartori, 4:00; Wallace, 4:00; Christie, 4:25; Canaut, 4:30.

MacDonald first showed in the return run north, but stopped a quarter of a mile away and lost 2:45 fixing the wires which had broken loose from the spark plugs. Stevens did not show up for over an hour, a piston having stuck. The actual order and times for 16 miles were: Fletcher, 13:25; Wallace, 13:47; Fredericks, 13:50; Sartori, 13:50; Bernin, 14:01; Duplos, 14:35; Christie, 14:56; MacDonald, 15:00; Canaut, 15:53; Stevens, 59:11%. In the next round to the lighthouse and back MacDonald with his ignition troubles mended overhauled most of the field, the score at 32 miles being:

Fletcher, 25:42%; Wallace, 26:23%; MacDonald, 26:26; Sartori, 26:39%; Fredericks, 26:48%; Bernin, 26:58%; Duplos, 27:19%; Christie, 29:02%; Canaut, 30:37%; Stevens, 74:48%.

It was now realized that Fletcher was making a great run in the race and becoming more than dangerous to the favorites. MacDonald accordingly put forth desperate efforts in rounding the turns and pulled up fairly close to the Frenchman. The 44 mile score was: Fletcher,

ANOTHER LITTLE NEWSPAPER BEAT

Ormond, Fla., Jan. 29—MOTOR AGE has scored another beat, despite the fact that Chicago is a round 24 hours further away from Ormond than is New York. Tonight the racing men and meet visitors are reading the only trade or class paper story of the tournament that has yet reached here. In other words, MOTOR AGE is alone on the spot on Sunday with a full story of tournament week up to Wednesday night, when it went to press, illustrations of cars and racing views taken on the spot included.

There has been a big blizzard that delayed mails and telegrams, too, but from MOTOR AGE's complete story there is only missing some introductory matter covering the 2 days before the racing actually began on Sunday. It was mailed on Monday, but the train bearing it was evidently storm-bound. The New York trade paper reporters had equally bad luck with the matter they mailed Monday, so that the Providence that is with those that

do things is again with MOTOR AGE in saving it a beat even in this comparatively unimportant feature of the story.

As early as Saturday morning there were inquiries for MOTOR AGE. Somehow people always expect it to be on hand first as a matter of course. The MOTOR AGE correspondent explained the greater distance and assured inquirers that we were not out for a first on hand beat this time.

When the MOTOR AGE correspondent arrived at the hotel to-day, at 3:30 o'clock from the Tomoka trip, he found quite a number of copies of MOTOR AGE, which had come by mail to subscribers resident at the hotel, or to subscribers who had ordered the paper to follow them on the southern circuit, already on hand. There was a big demand for a peep at them. Before dinner, however, the express had brought a package for general distribution. The New York papers are expected here tomorrow with the stale story.

35:12½; MacDonald, 35:32½; Wallace, 36:19½; Fredericks, 36:40½; Sartori, 36:40½; Bernin, 36:49½; Duplos, 38:25½; Christie, 39:38½; Canaut, 42:15½; Stevens, 85:46%.

Wallace was making a splendid race of it with his Fiat and was lively cheered. Fredericks began to have engine troubles. Just when in sight of the 60-mile post MacDonald, who was in the lead so far as order went, and perhaps in actual time, lost a tire and was out of the running. Score at 60 miles: Fletcher, 47:40; Wallace, 48:39½; Sartori, 49:32½; Renault, 49:45½; Christie, 53:24; Fredericks, 56:00; Canaut, 57:05.

The two Italian and two French cars now had the race all to themselves. The Fiats were getting more glory than any other make. A cracked cylinder put out the Pipe at 80 miles. At about this point Wallace, who seemed the sure winner at the end, threw a tire, but kept pluckily on to the finish on a bare rear rim. Score at 88 miles: Fletcher, 1:09:45½; Sartori, 1:12:18½; Bernin, 1:12:27½; Wallace, 1:14:51; Christie, 1:17:34½; Fredericks, 1:24:03½.

Fletcher was now, bar accidents, winner with a good margin. The survivors at this point kept in the race to the end and finished officially. The final figures are those kept and recorded by A. L. Riker and the Motor Age man and were accepted by the newspaper men as follows: Fletcher, 1:18:24; Bernin, 1:21:00½; Sartori, 1:21:44½; Fredericks, 1:24:28½; Christie, 1:27:16½; Wallace, 1:29:02.

The 5-mile race for the Brokaw trophy was next on the programme. It was run in two trials and a final. First heat, starters: E. R. Thomas, William Wallace, S. B. Stevens, and George Flinn, the latter in 60-horsepower Mercedes. They finished as follows: Thomas, 3:23½; Wallace, 3:38½; Stevens, 3:47½; Flinn, not timed. Second heat, starters: Sartori, Stevens and MacDonald. The latter had put on a new tire, but it did not fit and burst. Sartori won in 3:58; Christie, 4:08½. The final starters were: Thomas, Wallace and Sartori and the finish was: Thomas, 3:30½; Wallace, 3:46; Sartori, 4:15.

This trio were again promptly sent away for the last race of the day, the Ormond handicap at 5 miles. The order of finish and handicaps were: Sartori, 34 seconds, 3:57; Thomas, scratch, 4:02½; Wallace, 19 seconds, 4:04½.

AT 110 MILES AN HOUR

Ormond, Fla., Jan. 31—Special Telegram—Two days behind the original schedule, the last of the races on this all too long program were finished today. By way of a redeeming postscript to a lamentable all-around failure, so far as the weather and management went, H. L. Bowden made a brilliant cut of his own record, opening the day with the mile world's record of 32½ seconds, with his eight-cylinder Mercedes. He also undoubtedly cut the world's kilometre record of 21½ seconds, made by Baras in a Darracq at Ostend, Belgium, November 14, 1904. The failure of the timing apparatus to make the register of it, however, will prevent its standing as a record.

The trial took place at the conclusion of the regular program. It took an hour to rig up the timing apparatus at the mile and kilometre post.

The beach was then narrow, but there was a strong wind blowing from the north behind Bowden. Taking a start of over a mile the Bostonian swept down the course at terrific speed. A record was prophesied as he crossed the automatic tape at the kilometre. No pistol was fired, as it should have been, but at the mile it cracked and a dozen watches were snapped. None varied over a fifth of a second from the 32½ seconds announced.

Inquiry from W. C. Baker at the kilometre post disclosed the fact that while the automatic button had not been pressed, a watch had been snapped at 20½ seconds. The rate attained for the mile substantiated the probable accuracy of the kilometre watch, anyhow. Charles Basle will drive the car to-

morrow morning, when the only record breaking of the day will take place. In the final for the Ormond derby, Arthur MacDonald speeded his Napier 10 miles in 6:15, closely followed by E. R. Thomas in his Mercedes in 6:18½, both beating the Thomas record of 6:31½ by the young turf king with his Mercedes last Saturday. E. H. Fredericks was third, in 7:25%.

Arthur MacDonald won the E. R. Thomas trophy for a 20-mile race, run absurdly with a 2-minute control at the end of 10 miles. The times for the first stretch before the wind were: Arthur MacDonald, 7:03½; H. W. Fletcher, 7:06½; William Wallace, 7:15; Paul Sartori, 7:18½; E. H. Fredericks, 7:28%. The total of the times and order of the finish were: MacDonald, 15:23; Wallace, 15:34; Fletcher, 15:36½; Sartori, 16:01; Fredericks, 16:25%.

The 50-mile Daytona handicap was run in another series of unnecessary controls at each 10 miles. The finish was:

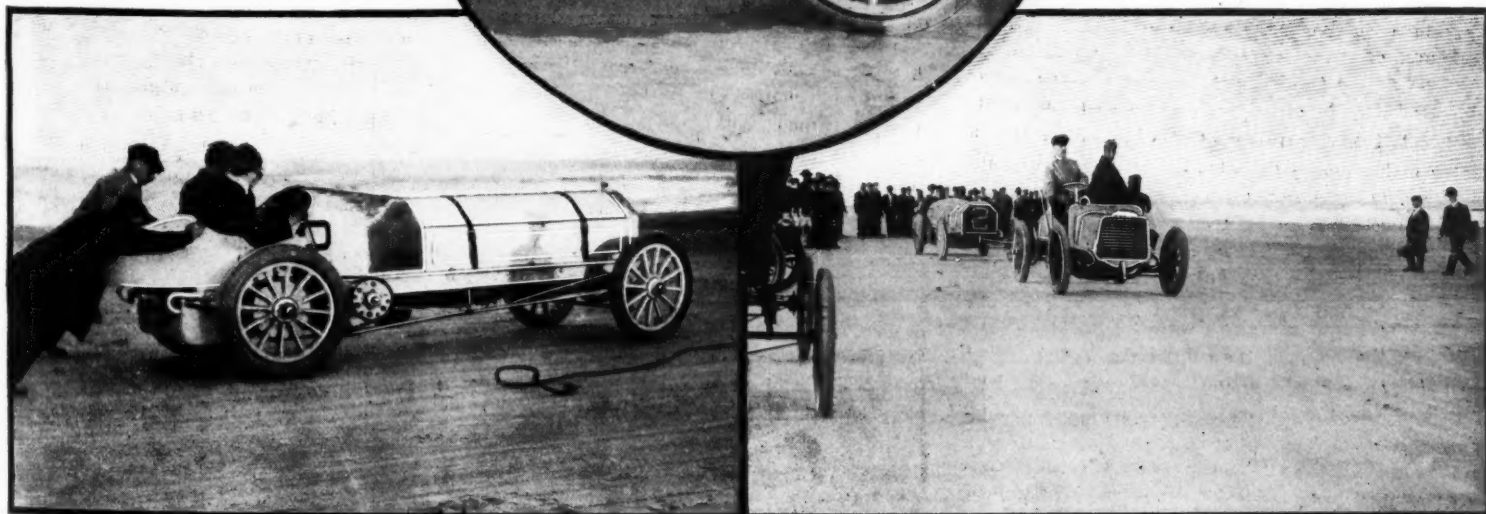
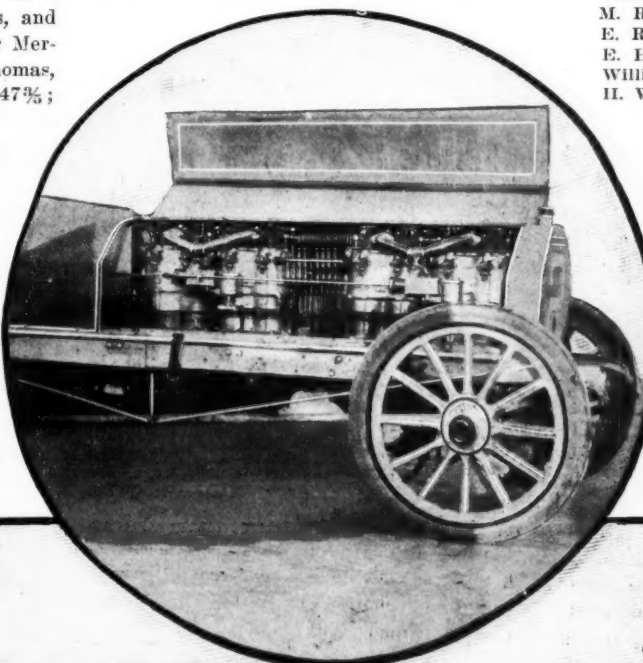
Paul Sartori, handicap 4:50, net time 43:43; E. H. Fredericks, handicap 4:00, net time 45:58½; Charles Canaut, handicap 8:00, net time 46:25½; H. W. Fletcher, scratch, 46:51; Walter Christie, 5:20, got as far as 40 miles in 37:02; William Wallace, 3:30, got as far as 40 miles in 42:27½; E. R. Thomas, 1:00, got as far as 30 miles in 27:35; Charles Canaut, 8:00, got as far as 30 miles in 29:49½; Arthur MacDonald, got as far as 20 miles in 22:08. Thomas had trouble with his clutch and MacDonald threw a gear wheel.

The 10-mile Ormond handicap resulted as follows:

Handicap. Time.	
Charles C. Canaut, de Dietrich.....	2:25 8:02 3-5
M. Roberts, Thomas Flyer.....	3:30 8:54 2-5
E. R. Thomas, Mercedes.....	:05 6:21 2-5
E. H. Fredericks, Mercedes.....	:40 7:16 1-5
William Wallace, Fiat.....	:10 6:52 1-5
H. W. Fletcher, de Dietrich.....	:10 6:55 4-5

MacDonald was on scratch, but had trouble of some sort and quit. Thomas' time is world's record from standing start.

After the races Walter Christie made a kilometre in :29 and a mile in :40. Most of the newspaper men and circuit chasers left this afternoon for Palm Beach. Charles Basle will try for more records with the Bowden Mercedes and MacDonald will have a go at existing figures if he can get his car in satisfactory running order. This will then officially end the meet.

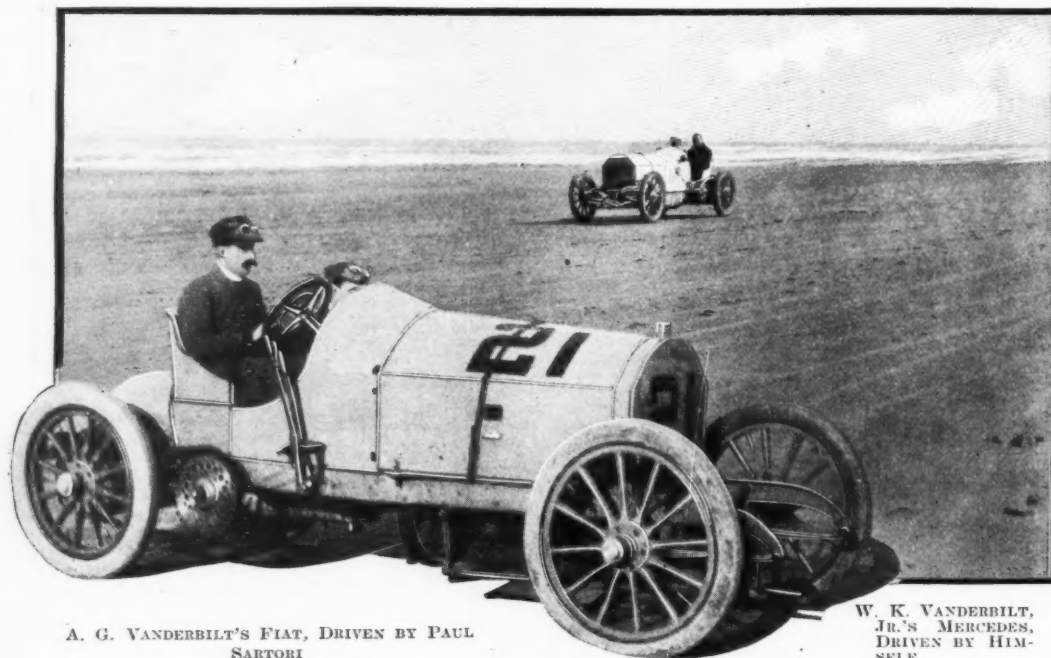


GIVING THE RECORD-HOLDER A PUSH-OFF

THE MOTORS OF THE BOWDEN REBUILT MERCEDES

TOWING THE CAR TO THE STARTING LINE

THE CURTAIN FALLS AT ORMOND



A. G. VANDERBILT'S FIAT, DRIVEN BY PAUL SARTORI

W. K. VANDERBILT, JR.'S MERCEDES, DRIVEN BY HIMSELF

Ormond, Fla., Feb. 1—Special Telegram—Ormond is again a staid, respectable winter resort, a place to come to when you are sick of the frozen north and want to enjoy a sunny land that only frowns when its peace is broken by the appearance on the scene of the American Automobile Association.

The annual automobile racing and record-breaking tournament is over and the Florida crackers have gone back to their shacks. Some of them, it is rumored, have the motor fever badly and are raising a fund to purchase the A. A. A.

The sputtering speed kings and their skillful drivers have gone. The enthusiasts who follow the circuit have gone. The officials and the imitation officials have gone. They have fled to the four winds,—some to Palm Beach for the motor boat races and some north and west to their homes. There is nothing left but the memory of a tournament of over a week productive of records, great races, racing surprises and disappointments, managerial surprises and disappointments, unusually unladylike Florida weather, unusually unladylike wrangles, the breaking up of a racing board and the making up of a new association.

Almost from the beginning the promotion of this year's Florida beach tournament has been fraught with trouble—most of it unnecessary and most of it brought about by the desire on the part of the trouble makers to seek position and control. It started with an earnest effort to boost the discoverer of the beach as a motor racing course from his position of active manager. It has ended with a new organization to supersede in control of the meet the childish Florida East Coast Automobile Association and thereby the final and decisive vindication of Senator Morgan.

But trouble did not end here and throughout the week the pleasantness of the occasion was marred by political gymnastics, while the weather man of Florida's east coast seemed to catch the prevailing spirit of disorder and pulled off several events not on the regular program of the sunny south.

However, what of it? The meet was held; was marked by record breaking and competi-

tion that sets a new standard for automobile speeding the world over, and was after all a great event in the affairs of Autoland. Honors were closely contested, evenly divided and well earned in each case. What Ross with his little American steamer; MacDonald with his six-cylinder British Napier; Bowden with his eight-cylinder American-remodeled Mercedes; Fletcher with the French de Dietrich, and E. R. Thomas with his Mercedes gained in prizes and glory as the stars of the meet they gained by straight clean sportsmanship, while what possible victory was lost by Christie with his front-driver; Oldfield with his Peerless Green Dragon; Wallace with his Fiat; Stevens with his Mercedes; Sartori, with A. G. Vanderbilt's Fiat; Bernin with Brokaw's Renault; Vaughan with the Decauville; Duplos with the Pipe, and all the rest of the participants in the sport, was lost without disgrace.

It has all been told in the previous stories; there is no need for a rehearsal of the greatest variety show ever put on in motor car sport in which both records and precedents went a tumbling and every time the curtain raised a new surprise was sprung.

The last informal day—a day of prospec-

tive record breaking by late-stayers—was a rather sad and dismal ending. The morning light sifted through a heavy fog and it was not until mid-day that it lifted from the great sand stretch along the shore. Then the speedway was found to be far from fast and record breaking impossible.

Two kilometer trials were made but they were not productive of interest. Charles Meyer drove the big 120-horsepower Bowden Mercedes over the kilometer course in 25 seconds and Oscar Hedstrom on the Indian motor bicycle made the distance in 40% seconds.

Then it was over and the newspaper men left at the post paid the Ormond telegraph operator their last visit for a year.

OFF FOR PALM BEACH

Palm Beach, Fla., Feb. 1—Special Telegram—Another of Senator Morgan's schemes had its birth today with every indication of amounting to considerable, even at present, and very much in the future. Today's opening of the Palm Beach Power Boat Association's first annual regatta passed off on Lake Worth under fair skies, graced by hundreds of fair women and with fair success from a racing standpoint.

Half a hundred automobile racing men and race followers who had been to Ormond were here and were well pleased with the change of the game and the delights of its new surroundings. Palm Beach will make a nice resting place, enlivened by good sport, before the circuit chasers start for Miami on Saturday and thence on Sunday for Havana for the Cuban automobile meet, for which five of the Ormond flyers are entered.

As was appropriate for an automobile circuit, an automobile man driving a boat fitted with an engine made by automobile builders was the star today. A. D. Proctor Smith, driving W. Gould Brokaw's Challenger, won both handicaps from scratch. In one he covered 4 miles in 8:41%, an average of 27½ miles an hour. The Challenger is fitted with a 150-horsepower eight-cylinder Simplex engine, and is well known to the motor boat and automobile world.

There were races this morning and afternoon. It is raining tonight and the parade is postponed. The Duke of Manchester and Sir Thomas Dewar acted as referees today, and both seemed to be highly interested in the races that were run.



ARTHUR MACDONALD IN THE SIX-CYLINDER NAPIER

WILL NOT SPLIT THE RACES

French Club Answers British Protest About Running Grand Prix and Bennett Races Together, and Shows Precedent for Its Action—Big Entree May Keep Out New Makers

Paris, France, Jan. 21—The Automobile Club of France has sent its answer to the letter of protest it received from the Automobile Club of Great Britain and Ireland. A similar letter was received a few days ago from the Automobile Club of Switzerland and the answer will be almost word for word like that sent across the channel.

Great Britain protested because the French club had organized another race and had decided to have it run at the same time as the Bennett cup race. To this the French organization has replied that twice since the international race has been in existence it was run at the same time as another event—first in 1901, during the Paris-Bordeaux race, and in 1902, during the Paris-Vienna race. S. F. Edge, the English driver, won the cup race during the latter event.

This is the principal and almost the only argument of the Automobile Club of France in defense of the charge of changing the rules of the international race by combining two events in one. There is no regulation, says the club of France, which stipulates that the Bennett event should be run differently. "We believe," says President de Zuylen in his letter on behalf of the French club, "that nowhere has there been given such marked proof of interest in connection with the Bennett cup than at the Automobile Club of France. We made the rules and it was owing to our perseverance that this event has reached its present popularity. We believe we are in a position to say that, notwithstanding its importance, the Bennett event cannot be considered, as you claim, the blue ribbon of the automobile sport. On account of the conditions of its program, manufacturers are not too insufficiently represented in it. It must not be forgotten that the cup was donated with the intention of stimulating competition among clubs and it would be giving the event a significance never intended if we were to depart from the donor's intentions."

The French club's stand is approved by local sportsmen, who claim that neither in 1901 nor in 1902 were there protests from other countries and that it is not reasonable to complain now, even if conditions have changed. Inasmuch as the number of starters will be limited and arrangements will be made to insure the regularity of both events, there is no need for alarm. Others still hold to their former opinion that the club has made a mistake. They say even if the number is limited the course is not long enough to allow forty cars to be driven upon it at the same time. They claim accidents will be unavoidable.

Up to the present the French club has not advised the government of the selection of the circuit d'Auvergne, and it is not exaggerating matters to say that many government officials have taken a decidedly unfriendly attitude toward the club. Almost every day some paper contains rumors that the government will not grant sanction for the big race.

Several leading manufacturers have decided to send a petition to the Automobile Club of France requesting that the entry fee for the

eliminating race be reduced to \$1,000 a car, pointing out that it is almost impossible to furnish the enormous amount of \$6,000 in case a maker wants to enter three cars. The request will most probably be rejected, the only promise made being that whatever money is not used will be returned to the manufacturers.

There has been some discussion as to what the drivers of the cars in the Bennett race or in the grand prix can earn. One of the oldest and most important makers told what conditions he made to his drivers. Each receives \$2,000 to drive in the eliminating race and whoever wins is given \$6,000. To drive in the grand prix and the cup race a driver receives another \$2,000 and if he wins either of these races he will receive \$8,000. Should a driver win the eliminating race and either of the other two events he will win \$18,000.

Another concern gives each driver in the eliminating race \$1,000, and \$4,000 is promised if the event is won. To drive in either the grand prix or the cup race he will get \$1,500 and \$5,000 in case he wins.

French drivers and mechanics are beginning to make repeated trips over the circuit d'Auvergne, although the roads are in bad shape now, and driving at great speed cannot be done. It is simply an indication that the French will do everything to keep the cup. It should not be considered strange if sometime when warm weather has made its appearance the daily papers report that a number of drivers have started around the circuit either on bicycle or in a motor car but at a 5-mile rate of speed; they intend to study every bit of the road.

At its last meeting the regulations of the grand prix of the Automobile Club of France were unanimously adopted. One of the most important points is that no cars entered for the race, either French or foreign, will be accepted to compete if they are made under a license given by another manufacturer if that manufacturer enters a full team. Thus in France the de Dietrich made under a Turcat-Mery license cannot compete, while the Opel-Darracq in Germany, and the British-made Darracq cars are also prevented so long as the Darracq made in France enters for the race. With regard to the Mercedes it is quite sure that if the rules are strictly observed no Austrian Mercedes, or English or American Daimler machine can compete if the German concern enters three cars. There is a current opinion that the Fiat of Italy is eligible, despite the fact that the Italian machine is made under Mercedes license.

The entrance fee for foreign cars will be \$1,000, which is in addition to the fee the foreign entrant has to pay to enter the Bennett cup race. The entries close March 1 and are subject to the approval of the French club. With regard to the French cars which are to compete, it was decided that if fifteen cars do not finish the entire course of the French Bennett team eliminating race, in order to make up the complete French grand prix race team of fifteen machines, those—

that first pass the last of the three intermediate point time-keeper will qualify.

Panhard & Levassor are the first French makers to enter the French eliminating race. They have entered three cars. It is doubtful whether there will be any Serpollet cars entered, as the well known steam car builder says the entry fee of \$2,000 is too high. The same opinion is expressed by Messrs. Brasier, Gobron, Charron, Clement, Darracq, and the representatives of such concerns as the Mors, Hotchkiss and Renault. Baron de Turkheim, of the de Dietrich company, is the only one who is in favor of the \$2,000 fee. He says that the Automobile Club of France needs a great deal of money to handle the race properly and that it should not be forgotten that not only one but three races are to be run.

The French daily press still protests the running of the grand prix and the Bennett cup race together, a number of important continental automobile clubs take the same stand and the English press continues hostile to the French club, while some British motorists advise that Great Britain should not send a team for the Bennett race unless the grand prix is postponed.

ITALIANS FIX DATES

Paris France, Jan. 16—It has been decided that the annual meeting of Brescia, in Italy, will be held during the week of September 2 to 10 and that the Florio cup event will be run on the last day of the week. The others events are scheduled as follows: Inauguration of the automobile show, September 2; automobile manoeuvres and special speed trials, September 4 and 5; motor boat races and competition for the cup of the duke of Abruzzes, September 7 and 8; Florio cup race, September 10.

It has been decided that there will be no neutralizations in the Florio race, the distance of which will be nearly 500 miles. The start will probably be made about a mile from Brescia, at Castenedolo, and then follow a circuit passing through or near Montichiari, Castegione, Guidizzoto, Goito, Castel-luccho, Marcaria, Bozzolo, Piadena, Cremona, Pontevico, Manerbio, Bagnolo and Zeno Naviglio. The circuit will have to be completed five or six times in order to make up the entire distance of the race and it is considered that while there are several very difficult parts of road, bridges and railroad crossings, the course is not so hard as the Taunus or the Auvergne circuits.

BRITISH MOTOR CYCLE TRIALS

London, England, Jan. 14—This year's motor cycle trials will probably be conducted on entirely different lines from those in previous competitions. More than a score of manufacturers have been asked to express opinion and make suggestions and the latter will have a decided effect in arranging the 1,000-mile reliability trial. The majority of the makers would like to have the trial held in August, while July and September are the next favored months.

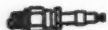


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EXPORTS STILL GROWING

The latest compilations of the government statisticians reveal the fact that the exports of automobiles during December last amounted in value to \$214,516, as against a value of \$223,548 for the same month of 1903. This decline during the last month of the year served to keep the total exports for 1904 from reaching the \$2,000,000 mark, the actual figures for the year being \$1,897,510. Even at that the year's exports were greater by several thousand dollars than ever before in the history of the trade, the best previous record being \$1,643,029 during the calendar year 1903. The exports for the calendar year 1902 were valued at \$1,069,782.

Thus, during the period from 1902 to 1904 our automobile exports increased in value \$827,728, and this is a record of which any industry might well be proud. When it is considered that the automobile industry is still one of the infant industries in point of years of existence, the growth of its foreign trade is little short of marvelous, and if what has already been accomplished may be taken as a guide, the near future will see the automobile export trade ranking with the other great industries of the country in the value of its product sent abroad.



The new schedule—Chicago to New York in 8 hours 55 minutes; 109.7 miles in the hour; each mile in 32½ seconds—put into effect on the Ormond beach, Florida, Tuesday, January 31, by H. L. Bowden driving a 120-horsepower American-rebuilt Mercedes automobile.

One hundred miles of continuous running in 1 hour 18 minutes 24 seconds—the fastest continuous 100 miles ever made by man in any way—accomplished on the Ormond beach Monday, January 30, by H. W. Fletcher driving an 80-horsepower de Dietrich automobile.

In running the Twentieth Century limited from New York to Chicago a relay of locomotives, each of which pulls the train about a hundred miles, is used. Fletcher in actually making a complete hundred miles in 1:18:24 showed that a relay of, say, nine de Dietrichs could make the New York-Chicago trip in 12 hours 46 minutes, or so that the passengers of the car could leave New York at 8 in the morning and be in Chicago at 7:46 in the evening.

The automobile is still third in rank of fastest miles made by the speed machines of man, but it has gained just 17.4 miles per hour in the year. Incidentally this means that the Daimler Motoren Gesellschaft sends its 1904 cars to this country and we fix them over to make them run just 17.4 miles an hour faster than any Mercedes has ever run before.

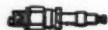
But while the locomotive on a flying short trip and a German electric railway car on a sim-

ilar short-distance stunt are still ahead of the automobile in speed rate per hour, the decided gain in motor car speed in a year shows conclusively that it will be but a short time before the automobile heads the list with the necessary mile in 27½ seconds to eclipse the rate of 130.4 miles per hour held by the electric car.

As the situation now exists the automobile is the fastest machine on earth for continuous running, there being no 100-mile run of any other means of locomotion which equals Fletcher's hundred in 1:18:24.

The present rates of speed in miles per hour of the different means of locomotion are as follows:

Electric car	130.4
Locomotive	120.0
Automobile	110.4
Motor cycle	69.2
Bicycle	62.0
Steam yacht	45.0
Running horse	37.4
Motor boat	27.8
Skating	22.2



At nearly every turn in its affairs the American Automobile Association demonstrates that it is an organization of little real usefulness. It has existed upon the bounty of automobile clubs throughout the country which have paid

WILL THE A. A. A. COLLAPSE?

a good price for the maintenance of a racing board to control automobile competition in this country. Now the racing board of the American Automobile Association is without a chairman and shy several prominent members; the association itself is without a president, and there is nothing but a quickly effected diplomatic coup that can prevent it from absolute disintegration.

The story of the mismanagement of the Ormond tournament and the American Automobile Association's part in the comedy of errors, is told in another column of MOTOR AGE of this issue. It is but another addition to the long string of tales of ineffectiveness, foolishness and grotesqueness which has composed the history of the American Automobile Association.

What the sequel will be is conjecture, but it is plain enough that the A. A. A. is not satisfactory to American automobiling or to itself; that it has muddled its affairs continually; that it needs reorganization and regeneration to ever amount to anything, and that this reorganization must be based upon the establishment of a racing board which will claim the respect of automobiling.

There is talk of prevailing upon Mr. Pardington to again accept the chairmanship of the board, and it is probable that this is the wisest thing that could be done, on account of the fact that Mr. Pardington at least is widely respected, has had experience, has made mistakes and profited by them, and is a gentleman and a diplomat. Whether or not the rehabilitation of the racing board is effected in this way, it must be done quickly if done at all.

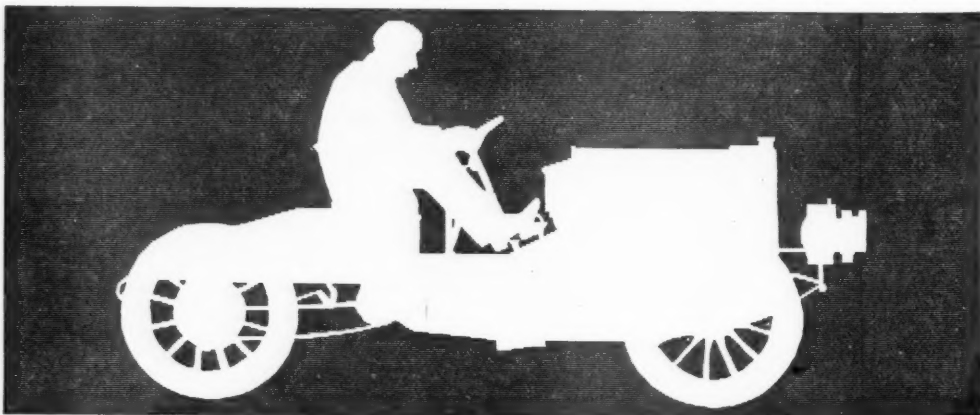
Outside of the New York contingency, which has persistently endeavored to boss the A. A. A. and to use the other clubs belonging to it simply as good things upon whose bank accounts to draw, there is little respect for the association and little chance of active assistance in reorganization. The clubs throughout the country have had very little to show for the money they have paid into the American Automobile Association. They realize it, and it would not take much argument to bring about open revolt.

The time is ripe for the establishment of some system of national organization which will consistently and practically represent the interests of both clubs and individual motorists, and those of automobiling generally.

It is barely possible that the consolidation of the American Motor League and the American Automobile Association, which was attempted last year and defeated by the trickery of a certain clique in the A. A. A., may be the outcome of the present conditions, but even if such a consolidation is to be effected it behooves the American Automobile Association to play its part with considerable care, because it is now in no position to attempt to dictate terms to the A. M. L.

If it is not put upon its own feet soon, it will be in luck to be allowed to consolidate with the American Motor League. For the latter, after its throw-down last year, has vigorously pursued the work of increasing membership, and is in a far healthier condition today than is the A. A. A.

Whatever may be the outcome of the situation it is to be hoped that all of the follies of those who have tried to boss the American Automobile Association and, through it, American automobiling, will serve as a lesson, the learning of which will prevent future miscontrol of important affairs.



Jump Sparks

In the meantime one Mr. Potter probably smiles quietly to himself.

Before leaving Ormond the A. A. A. came pretty near to taking a running jump at the ocean.

The Ormond tournament is where A. L. McMurtry and his timing apparatus become famous.

The Daimler Motoren Gesellschaft would do well to hire Mr. Bowden as chief of the repair and remodeling department.

The next time an A. A. A. is organized it is probable that advice from experienced persons will not be loftily turned down.

MOTOR AGE predicted some time ago that Senator Morgan would bob up with something new and is delighted to be able to repeat, "We told you so."

In all this excitement about the A. A. A., the A. L. A. M. is shamefully neglected. Let it be known that when the press agent gets back to New York it will receive proper attention.

If anybody is pleased to know the big events are about over for a time it is the poor newspaper man, for the strenuous life he has been living for the past few weeks is even too much for him.

Now that Sir Thomas Dewar has broken into motor sport it is said that Baron Anheuser-Busch-Budweiser and Count Heptol-Splits are co-operating in the purchase of a trophy to be known as the before-and-after cup.

The Napier company was the only European manufacturer to actually send a racing car to Ormond to race, the other European cars being the property of American owners. America is glad to give the Napier company the laurels it won.

According to the rules of the race for the grand prix of the Automobile Club of France, cars which are built under license from the manufacturer of another car are not eligible to compete if the licensing manufacturer enters three machines. This is where the Electric Vehicle Co. has the bulge on American representation, for if it cares to enter three cars it thereby shuts out every automobile in this country that is "protected" by Selden patent license, and even should the Electric Vehicle Co. not enter the race only three of all the licensed cars would be eligible. Thus George Day may become the potentate of the affair, with Milton J. Budlong as chairman of his racing board.

The Vanderbilt and the Glidden cups are almost god-fatherless.

Seventy-six miles an hour for 100 miles, with a number of bad turns—guess that's going a few.

Those people who were sympathizing with Senator Morgan a short time ago have another report to make.



Possible disruption of the A. A. A. over the management of the Ormond meet; officials resign; chance that consolidation scheme of last winter of A. M. L. and A. A. A. may go through if A. A. A. does not die too soon.

Records tumbled at Ormond. Mile cut from :34 1-5 to :32 4-5 by Bowden; kilometer from :21 2-5 to :20 3-5 by Bowden; 50 miles from 40:49 4-5 to 38:54 by Fletcher; 100 miles to 1:18:24 by Fletcher.

Makers of France see need of commercial car show and are sounding trade on this subject with view of holding such an affair.

Motorists all over the country fighting unreasonable legislation relating to automobiles proposed in many legislatures.

French club replies to Britishers and declines to separate Bennett and grand prix events; complaint about size of entry fee.

Show at Brussels opened by king; nearly 200 exhibitors, including all prominent French makers and one American.

Automobile Club of Great Britain and Ireland arranges important dates for the forthcoming season.

Ford Motor Works figuring on erecting plant at Vancouver or New Westminster, B. C.

Show at Philadelphia closes with profit to promoters and satisfaction to exhibitors.

Buffalo dealers to shave down price to be allowed on second-hand automobiles.

Exports for 1904 show a decided gain over those of previous calendar year.

French makers inclined to hold show much earlier than heretofore.

New racing association formed at Ormond to conduct Florida races.

Big events to be run in Italy scheduled for 1905.



Chicago has the epidemic—automobile is the only language spoken there just now.

The makers of France want earlier shows. So does everybody else, but the trouble is everybody seems afraid to tackle the question in a serious manner.

The advance descriptive circular of a western automobile says: "Time and experience has not been taken into consideration." It is not every manufacturer who is so honest.

England, France, Italy and a few other countries on the other sides of the globe have already made out their trade and sporting schedules for 1905, but nobody has heard of any dates on this side of the water.

When Fletcher in the de Dietrich won the 100-mile race handily Count Chassis de Garage gave the Baron Motorwagen Gasellschaft the ha ha, but when Bowden in the big Mercedes made the miles in :32% the baron handed it back.

GUESSING CONTEST EXTRAORDINARY—MOTOR AGE offers a life-size photograph of the Florida East Coast Automobile Association kicking itself around the beach, to the person sending the best answer to the question: What is the A. A. A.?

The Automobile says that its report of the annual meeting of the N. A. A. M. was obtained from an authentic source. Inasmuch as representatives of the Motor World and MOTOR AGE were the only newspaper men in attendance someone is complimented.

This is a great time for mowing. The Japs mow down Russians by the thousands, the Russian soldiers mow down their own people by the hundreds, and the American and foreign automobiles mow down times by minutes. Here again the farmer is beaten at his own game. No wonder the poor tiller of the soil is put out with automobiles.

It must have been disappointing to S. F. Edge to receive a cablegram from Arthur MacDonald announcing that the Napier had broken the mile record and in a few moments to have received another saying a German-American car had swiped the figures before he had even had time to get in one little whoop.

A commercial car show in France is deemed necessary in order that prospective buyers may not be run over by the faddists who attend the salon. The day will come when the commercial car show will see all the big concerns represented and the pleasure end of the game more of a side show.

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BRUSSELS SHOW GRAND

Big Affair Opened by the King and Is Entirely Complete on the First Afternoon

Brussels, Belgium, Jan. 15—At 3 o'clock yesterday afternoon a rapidly-driven big German touring car stopped in front of the royal entrance of the immense hall of the Parc du Cinquantenaire. A white haired man stepped from the machine; an aid helped him and hundreds of people representing the elite of Brussels society and tradesmen yelled repeatedly: "Vive le roi, vive le roi." The old man, for he is now 70, was King Leopold II of Belgium, who had come to inaugurate the fourth annual Brussels automobile show.

Like the French, the Belgians have worked hard the last few weeks in order to be able to have all exhibits in place on the opening day. For the first time in the history of Belgian shows this has been accomplished. Thus the king was enabled to see on his first visit the progress made by the native manufacturers and by those of France, Germany and Italy, who had their newest styles on display.

To describe the Belgium show would be making a description of the salon de Paris, inasmuch as with the exception of many Belgium concerns all the others were in the Grand Palais in Paris last December. In fact, in most instances the cars shown here are the same as those exhibited a month ago in France. The cars made in the land of the Pipe, the German, the Minerva and others do not show striking changes from the 1904 models. The only thing which seems decidedly different from last year is the remarkable increase in the number of commercial vehicles exhibited and there seems little doubt that the manufacturers of this little nation have come to the conclusion that it is more profitable to go after the commercial car trade than to put all efforts in the construction of pleasure vehicles.

While the cars of the former were not seen in the Grand Palais of Paris but had been relegated to the flower gardens of the French capital, here, in little Paris, they are prominently displayed in scores of stands all over the big hall. To one who has seen previous shows here and in Paris, it appears as if the manufacturers and the show committee purposely wanted to have the commercial cars in the foreground and from the impressions gained during the first day of show the crowd was as much interested in these cars as in the pleasure vehicles. This is well worth noticing, will be an encouragement for makers, and may also lead them to insist that the commercial cars be given as prominent positions in other cities at the shows as here in Brussels.

Another notable feature is the large display of motor cycles. While not so elaborate as in Paris, there are more machines displayed in proportion to the number of builders of this class of machine. Most all of the automobile makers show chassis, but in some cases only one. A manufacturer was asked why he exhibited only a chassis, whereas he showed several completed cars last year. He said prospective buyers generally care to see the chassis, the motor especially, and that at the Paris show it was a noticeable fact that chassis were given more attention by the visitors than the completed cars.

There are 192 exhibitors, which number about fifty exhibit motor cars or motor cycles. The others show parts and accessories, while a dozen stands were taken by about as many trade papers and daily journals. A feature in the gallery is the country inn, arranged by the Automobile Club of Namur and Luxembourg. It is a reproduction of an old-time inn and its furniture is that of centuries ago. The walls are decorated with old firearms, while the floor is paved on one side with rough stones and on the other with macadam, thus showing the contrast between the old and the new road system.

The decoration of stands is in many instances as elaborate as those of the Grand Palais, but in general the disposition is more tasty than in Paris. There is no gravel or sand in the aisles, as was the case in Paris, and thus the booths are always clean and the cars and chassis do not have to be dusted during all hours. The hall is decorated with thousands of incandescent lights, which at night present a splendid sight.

One of the most attractive stands is that of the Neue Automobile Gesellschaft, of Berlin. Two trucks are displayed, one being loaded with a ton of sand. On the stand of the Minerva half a dozen motor cycles, two 5-horsepower Minerva voiturettes, several big cars and two chassis are displayed. La Metallurgique shows 8, 12, 16 and 24-horsepower completed cars and two 16-30-horsepower chassis. Renault, from Paris, has the 10, 20 and 20-30-horsepower chassis and a landaulet, which were shown in Paris. The only American car is the Oldsmobile. Both the runabout and the touring car are here and attract attention.

At the stand of the Pipe there is a variety of machines, including commercial, touring and racing cars. The first of the several hundred omnibuses to be furnished the Italian government is displayed, also a 12-horsepower delivery car, a limousine, a coupe, a 20-horsepower touring machine and the Pipe racer which was sixth in the Bennett race. Motor cycles and motors are shown by Antoine and among them are machines with 3, 3½ and 4-horsepower motors. Some have automatic valves and others have mechanical valves; some have magneto ignition; some have one, two or four cylinders. All told it is one of the most interesting exhibitions of motor cycles seen at any show for many years.

The feature on the stand of the Royal Star is a 200-horsepower cylinder for a motor boat, which is being built for the Monaco races. The concern also shows cars and motor cycles. German cars are shown both in touring and commercial styles. Among the latter is one of the sixty omnibuses the concern contracted to furnish to a transportation company recently organized in London. Darracq has half a dozen cars and a chassis, while the cars and chassis of the new firm Delaunay-Belleville, of France, are the same as those at the Paris show. Samples of the latest Mercedes models are shown, also of the Benz. Among the other well known machines are Mors, Richard-Brasier, Fiat, Decauville, de Dion-Bouton, Hotchkiss, Vivinius, Radia, C. G. & V., F. N., Cosmo, Aries, Bayard-Clement, Direct, Locomotrice and Saven-then, a new Belgium concern.

The most important manufacturers of accessories and parts from France, Germany and Belgium are well represented at the show. All kinds of tires, anti-skidding devices, lamps, tools and apparel are displayed.

CUT SECOND-HAND PRICE

Buffalo Dealers Find They Have Been Paying Too Much for This Class of Goods

Buffalo, N. Y., Jan. 30—Buffalo's automobile dealers and manufacturers' agents have come to the conclusion that they have been paying too much for second-hand cars in trade and they are preparing to reduce the scale of amounts to be allowed for cars which are turned in as part payment for new machines.

The movement was started recently at a conference of several of the largest dealers and they expect that others will follow their example. One of the dealers who asked that his name be not mentioned until it was certain that the movement was to have nearly general support among the local automobile houses explained today that the movement may be considered as evidence of the growing confidence of the dealers that their business is to be large anyway.

"Heretofore," he said, "Buffalo dealers have been willing to allow large amounts on old cars for the sake of selling new ones. Of course the second-hand machines were disposed of at a loss and furthermore we had to make two sales to get rid of one new car. The outlook is that the demand for most of the cars sold here will be so large this year that the trouble will not be in making sales but in filling our orders and we propose therefore to diminish our expense—for selling second-hand cars at a loss is an expense—by reducing the amounts to be allowed on cars taken in trade."

"What will you allow on a 1904 car which is in good condition when a trade is proposed?" was asked.

"Well, on small and medium sized cars the reduction will be at least 30 per cent from the cost of the machine at retail last year. On the largest cars the reduction will probably be greater, for persons who are willing to put up the price of a second-hand big car want the latest improvements and the sales will be slow. The bigger the car the slower the sales.

"At the present time practically all of the cars we take in trade are sold by us in this city. We have no other means of disposing of them. In the bicycle days there were men who bought up large numbers of second-hand bicycles and sold them in parts of the country where buyers were not particular so long as they could get bicycles at low cost. The automobile is too expensive a proposition for that class of business just now, so every machine we take in trade is just so much added strain on our time to say nothing of the actual money loss in the transaction.

"Of course, the advent of the side entrance car has had the effect this year of reducing the values of old cars. The increase of the number of medium-priced cars of relatively high power is another thing which operates against the speedy sale of second-hand vehicles.

"It is not that the real value of a motor car depreciates 30 or 40 per cent by 1 year of good usage. The car itself retains much more than that percentage of actual worth if it has been well cared for and the orig-

inal buyer is satisfied to keep it, but changes in style are a most potent factor in directing the course of the demand in automobiles as in other things and the price we can get is strongly affected, as I have shown you by the general adoption of some new feature, such as the side entrance."

One of the other dealers interested in this same movement to reduce the allowances for old machines put the amount to be credited on a trade at \$600 for a car which had cost \$1,000 new in 1904. He said he was not anxious for deals of that sort, feeling that he could do a large business with a greater percentage of clear profit by restricting his sales as much as possible to new cars disposed of for cash.

WANT REGULATIONS CHANGED

Paris, France, Jan. 18—The second-hand automobile dealers will shortly call a meeting to pass resolutions to be presented to the authorities asking that the present regulations concerning them be changed. They claim that the requirements are so unreasonable and cause them so much trouble that business suffers on account of it.

When a dealer buys a car he receives from the owner the receipt the latter has received from the authorities at the time he had his car licensed. The dealer must then immediately go to the authorities with the receipt in order to get a new one, which is to take the place of the one which the former owner had. This new receipt generally is not ready until about 3 weeks after the dealer has called on the proper city officials. According to the law the dealer can not use the machine he just purchased until he has the proper documents. This means to him a loss in time of more than 3 weeks, and possibly the sale of the car.

Even if the dealer does not intend to sell the car before having the city's receipt, and simply has the car taken out for trial or testing purpose, his employees are liable to be fined. The second-hand dealer can thus follow one of three policies—go to the city authorities to get a new receipt only after having sold the machine, advise the officials immediately after having bought the machine and try to sell it without permit, or hold the car before using it until the proper documents have been received. The last of these three policies to be followed is the one which ought to be adopted according to the regulations, but it is the one against which the dealers have the strongest grudge.

WANTS PATROL AUTOMOBILES

Minneapolis, Minn., Jan. 30—Chief of Police Doyle wants two automobile patrol wagons to care for the down town section, and under the existing circumstances he is likely to get them. The city jail has just been moved from "Lock-up alley" to the new court house and city hall. There is no accommodation at the new building for the patrol wagons, and it will be necessary to purchase property in another block to build stables. The chief has found he can run motor cars into the big new building, and have room to keep them there. He is weighing the cost of new stables and of maintenance of horses and rigs against the cost of the motor vehicles, and will have a strong argument to present to the council when he makes his application.

QUAKER SHOW SUCCESS

Large Crowds Attend Despite Bad Weather Conditions—Profits Said To Be About \$6,000

Philadelphia, Pa., Jan. 30.—The usual blaze of glory which marks the finish of any successful undertaking paled into insignificance in comparison with the brilliancy of the wind-up of the local automobile show last Saturday night. If large crowds, big business and a fair profit to the promoters constitute a successful show, last week's was it. The conditions prevailed throughout the week with the exception of "Blizzard Wednesday," when any sensible person who had a home stayed in it. The admission figures for that day indicated that Philadelphia's claim of being the city of homes is justified—and that the inhabitants may be classed as eminently sensible. It was a bad day for automobile shows. But the other days the weather clerk did considerably better, and the closing day saw such a gain in the harmony—and outside, where the demonstrators demonstrated—as warmed the cockles of the promoters' hearts and made them forget that such things as blizzards existed.

And the exhibitors? With few exceptions they reported business—some of them disposed of upwards of a dozen cars. Cars as soon as disposed of were decorated with the legend, "Sold to So-and-So." Among these was a \$6,000 Pope-Toledo to Jim McNichol, a local political idol. Some of the more enthusiastic—promoters as well as exhibitors—tried to bring about an extension of the show till Tuesday night, but as many of the latter were scheduled to go to Chicago during the week, they didn't care to be rushed as they were last week, and the project was given up.

The demonstration feature was one of the most popular of the show. All day long a score or two of cars were constantly packed out in Broad street awaiting prospective purchasers—and others. Even on Blizzard Wednesday the game was continued. The Snowful Knox pulled off a clever stunt during the day by carrying a cargo of over a dozen exhibitors and pressmen to dinner and back through the drifted streets. The air-cooled feature of this car wasn't particularly overworked during the trip, which was accomplished in jig-time. Motorcycles and motor boats were well represented.

Not fewer than a dozen additional exhibits were installed in out-of-the-way corners during the week. Of course they were small ones, being mostly accessories and things no automobilist should be without.

The management positively asserts that there was no favoritism in the awarding of spaces to exhibitors. These were assigned to the various applicants in the order in which their applications were received. It was stated on Saturday, on reliable authority, that the organization of local tradesmen which managed the show will clear nearly \$6,000.

FRANKLIN FILES ANSWER

Syracuse, N. Y., Jan. 28—The H. H. Franklin Mfg. Co. has filed its answer in the action brought against it by the New York Automobile Co., making a denial of practically all the facts alleged in the complaint. The New York Automobile Co., which consists of Arthur R. Peck, Ernest I. White and other Syracuse men, in the complaint

says it hired John Wilkinson to construct an automobile and that he got out a model machine. It claims at that time that H. H. Franklin was one of the company and that he acted as the agent in certain negotiations thereby becoming possessed of certain secrets owned. The claim is also made that Mr. Wilkinson and Mr. Franklin left the company and with Alexander T. Brown formed the H. H. Franklin Mfg. Co., taking with them the model machine and all the secrets. The Franklin company denies these allegations and says Mr. Wilkinson had severed connection with the New York Automobile Co. long before the Franklin company was formed and that he never received any pay from the New York concern. The plaintiff claimed that the air cooling dea and the four-cylinder plan belonged to it and Mr. Wilkinson had no right to sell them to the Franklin company.

CLAIMS FOR STORAGE BATTERY

Milwaukee, Wis., Jan. 30—What purports to be an entirely new feature in connection with the operation of electric motor cars is the storage battery which is being employed on the machines put up by Milwaukee concerns. The battery is the invention of a Milwaukee man and was only recently perfected. Test of it was made last summer. The Electrical Vehicle & Supply Co., which has just opened a garage in Milwaukee, has made use of this device with considerable success. This concern is handling the Studebaker machines; it is buying them minus the batteries, installing those of the Milwaukee make and marketing the machines. Already the Milwaukee company is making the claim that its electrics will run 24 hours of the day less a few moments for recharging and will run 100 miles on single charge, going at a speed of from 18 to 25 miles an hour. The company proposes to dot the entire map of Wisconsin with charging stations; it has established six such stations between Milwaukee and Chicago. Plans are being made for greatly extending this work next season.

For the storage battery which this company is using, it is claimed there is no other made that will perform the same work. With proper development it is hoped by the promoters to get a 150-mile run out of the machine equipped with this battery on a single charging.

ANOTHER OLDS WAGER WON

Chicago, Ill., Jan. 31—Saturday evening at 6 o'clock an Oldsmobile touring car containing four passengers, including the driver, stopped in front of the Auditorium Annex. The machine was almost covered with ice and snow. When the half frozen men stepped into the hotel they said they had just arrived from a little pleasure trip from Detroit, Mich. Two of the travelers were the agents of the Olds Motor Works in Moscow, Russia; a third man was Advertising Manager Buck of the American concern, while the driver was Huss. The trip had not been made as a winter pleasure tour but was the result of a wager made by the foreigners with the Detroit man, the former claiming the car to be unable to travel from Detroit to Chicago at this time of the year in 18 hours, as claimed by Buck. The trip was made in 17 hours. In order to get through certain parts of road it was necessary to shovel the heaps of snow.

FACTORY ACROSS BORDER

Ford Motor Works Contemplates Plant at Either Vancouver or New Westminster, B. C.

New Westminster, B. C., Jan. 25—For the purpose of selecting a suitable site for a new automobile factory which it is proposed to establish in this city, J. A. Gilmore, Sr., and William Gilmore, representing the Ford Motor Works, of Detroit, Mich., are spending a few days in the city. The factory which they intend to erect here will be equipped to turn out the well known Ford cars and also build all classes of gasoline motors for use in motor boats and for other purposes.

At present they are undecided whether the factory will be located in New Westminster or in the neighboring city of Vancouver, 12 miles distant. It is understood, however, that they are inclined to favor New Westminster, for the reason that it is probable that better inducements can be secured here. The Gilmores have spent the past week in carefully looking over the field in company with Frank DeGrey, a well known local motor enthusiast, who is also the owner of a small fleet of gasoline boats.

J. A. Gilmore stated that the main reason for wishing to establish an automobile factory in British Columbia was to enable the Ford Motor Works to successfully compete with cars of English manufacture which are now being imported into the province quite extensively. The heavy duty on American cars places them at a decided disadvantage in competing with British cars, and despite the heavy freight charges on the latter, the cheaper runabouts can be laid down here at less cost than runabouts of American manufacture.

Mr. Gilmore considers that in view of the fact that a suitable location for a factory can be secured at a low cost in New Westminster and that rent, electric power and water rates are lower than would be paid in Vancouver, he is inclined to recommend New Westminster as the location of the proposed factory. At present it is all a question of what inducement will be offered. In a short time he will submit a proposal regarding a bonus to the New Westminster city council. As the municipal council is known to be favorably inclined to foster new industries, and as this will be the first automobile factory to be established in British Columbia, it is thought some satisfactory agreement can be reached between the promoters of the new industry and the councilors.

At present Mr. Gilmore has a small automobile factory established in Bellingham, Washington, near the international boundary line. It was established principally for the purpose of supplying the British Columbia field in the lines of automobiles and gasoline motors. But owing to the tariff Mr. Gilmore found he could not successfully compete with English imported cars. In the event of the new factory being established in New Westminster it is Mr. Gilmore's intention to continue the Bellingham plant also in operation, as there is a considerable demand in that field for motors for small gasoline boats and auxiliary engines for cruising yachts.

Providing sufficient inducements are of-

fered to the new concern by the New Westminster council, it is the Gilmores intention to devote their attention to turning out a new type of light runabout which, they are confident, can be sold at a figure that will insure a large and ready sale and be much below the price of any runabouts of English make. This class of machine would be highly popular in British Columbia, where the majority of the people do not care to invest in a high-priced touring car owing to the somewhat limited district available for touring purposes.

BRITONS ARRANGE DATES

London, England, Jan. 14—The Automobile Club of Great Britain and Ireland has recently decided upon the schedule of the various events which it will organize or patronize during the year. During February the annual dinner of the club is to be held, also a motor lamp competition and a 100-mile trial for club members. The annual meeting of the club will take place March 8 and the 1,000-mile trial for light motor cycles will begin April 3 and end 5 days later. From April 26 to May 31 competitions for light vans are scheduled, while the annual May-day parade may be held April 29 or May 1.

The Auto Cycle Club's hill-climbing contest will be held May 6, and on May 12 or May 19 a 100-mile trial for club members will be run. May 15 or 31 has been chosen for the eliminating race for the international motor cycle race, while May 30 is selected for the running of the eliminating race for the Bennett cup race. Motor cycle trials are to be held May 31, but it is likely they will be postponed.

A hill-climbing contest for members of the club has been arranged for June 10, and is the only event thus far scheduled for that month. The Auto Cycle Club consumption trials for the Car Magazine trophy, the hill-climbing contest for the Henry Edmunds trophy, the annual Brighton beach speed trials, the Calais-London motor boat race, and the eliminating race for the British defenders of the international motor boat race are scheduled for July.

From August 14 to 19 the 1,000-mile motor cycle endurance run of the Auto Cycle Club is to be held, while a 100-mile trial for club members will be run August 11 or 18. The annual race meeting of the Auto Cycle Club will probably be held September 12; the tourist trophy race for motor cars September 14, reliability trials for cars from September 18 to October 3. During the latter month speed trials arranged by the club will also take place.

FAVORS EARLIER SHOWS

Paris, France, Jan. 16—At a recent meeting of the Automobile Board of Trade, at which such well known manufacturers as Peugeot, de Dion, Brasier, Krieger, Clement, Kellner, Turgan, Renault and Vedrine were present, a resolution was unanimously adopted suggesting that the annual salon be held as early as November 15. This matter had been talked about for many weeks and it is said that consultations have taken place among all the leading makers of cars and bodies and motor cycles of France with a view of advancing the show dates. It is now almost certain that the salon of this year will be opened at least 3 weeks sooner.

COMMERCIAL SHOW NEXT

Foreign Makers Realize Great Importance of Business Side of Automobile Industry

Paris, France, Jan. 2—People are often astonished because they do not see many large passenger or merchandise cars used in the country, those generally used being of small size, carrying fewer than a dozen passengers and less than an actual weight of 3,500 to 4,500 pounds. The principal reasons for this state of affairs are that prospective users of such vehicles generally stipulate a speed which makes it necessary to build motors of great weight—they want the vehicles to carry loads which require making the cars heavier than four wheels of average strength can stand, and the roads in many sections will not stand an extra heavy load.

From tests made it seems that a good road will stand a weight of from 3,000 to 4,000 pounds per axle, especially if the rims of the wheels are wide and fitted with rubber tires. In case a greater weight is to be considered the load must be distributed upon more than two axles and the system used in the Renard train or the three-axle system as used in the combination electric-gasoline truck of Krieger, are the systems which give the best results.

A great mistake made by users of such big trucks is that they want the machines to go at a great rate of speed. Some stipulate 12½ to 15 miles an hour; others want even greater speed. Various tests made with trucks having heavy loads show that a speed of 9½ to 11¼ miles per hour is not only the safest but also the best average, because when driven at a higher rate of speed the heavy cars were oftener subject to trouble. There is nothing gained with higher speed, while on the contrary much better work is accomplished with a moderate speed.

At the salon among the heavy and even the light commercial cars and vans and trucks the weight of these vehicles was much more in proportion to the size and to the load which the vehicles were supposed to carry. Heretofore it has been one of the mistakes of builders of such cars to overlook taking into consideration the roads upon which the heavy cars were to be driven. Nowadays the manufacturer wants to know especially about the roads in the section of the country for which the vehicles are destined. This enables him to discuss matters with the intending buyer with better results in view and without taking so many chances in promising certain things the car may do and which it cannot possibly accomplish if the roads are, for instance, sandy or soft.

The problem of the useful cars, which is meant to be the commercial car, has not yet been given the general attention it deserves. The majority of automobile manufacturers are yet too busy to have much interest in touring vehicles. The few who give the useful cars the careful and needed study this branch of the industry requires will soon begin to reap a harvest, because there is a crying demand for this kind of vehicle. The commercial cars displayed at the recent show by such concerns as Decauville, Panhard, Turgan, Neue Automobile Gesellschaft and others, were examined by many business men who contemplate exchanging their horses and wagons for the motor. It is to be regretted that such an important

section of the salon should not have found the necessary space in the Grand Palais, where it would have been seen by more people and its makers would thus have been able to derive a greater benefit. It will not be long before an exclusive exhibition of commercial cars will be held in Paris, if the rumors which go around are fairly accurate. Such a show would not attract the masses like the touring car exhibition but it would certainly attract heads of firms from many lands.

DETROIT IS READY

Detroit, Mich., Jan. 30—From the enthusiasm shown by local manufacturers, the Detroit automobile show is bound to attract crowds from many towns in the state and from across the border. When the Chicago show closes February 11 there will be some hustling done to get the exhibits on trains leaving that night for this city. This will be absolutely necessary in order to be here Monday, when the local show starts. This year the displays will also be larger than heretofore and everything will be done to maintain the reputation of the automobile center of the country. Local men think Detroit should be able to have as great a show as Chicago, inasmuch as so many leading manufacturers are located here.

CHICAGO SHOW IS NEXT

Coliseum Now In Management's Hands and Being Prepared For Big Exhibition

Chicago, Ill., Feb. 1—Today the management of the fourth annual automobile show in the Chicago coliseum took formal possession of the building, and the usual nightmare of energy will whip the exhibition into shape by Saturday, the opening day. Already much of the preliminary work in the laying of special floors, etc., has been accomplished under the direction of Superintendent Fest, and it is probable that there will be less need than ever before of a strenuous last-minute rush, unless the exhibitors are unexpectedly delayed in getting their goods into the coliseum.

The general lay-out of the show will be the same as last year with the exception that the second floor of the annex, previously used as a restaurant, will be entirely devoted to exhibits. Thus the entire main floor of the coliseum and annex will be principally devoted to displays of complete vehicles, while the parts and sundries will occupy both the coliseum balcony and the

second floor of the annex. All of this space was sold some time ago, but there has been such a demand for space that at the eleventh hour it was decided to open a line of shallow spaces against the balcony wall on the west side of the building.

Altogether there will be over 200 exhibitors at the show. Most of the exhibitors of complete vehicles have exhibited at the New York show, but there will be the usual crop of western makers who have not shown their cars in the east, making the Chicago show their debut. There will also be a considerable number of parts and appurtenances that were not shown in New York. Thus the show will be substantially a combination of the exhibits of the representative concerns of the trade who annually exhibit at both shows, and of those western makers of both cars and parts who exhibit their products first at the Chicago show and thus serve as substitutes for similarly situated eastern concerns who show only at Madison Square garden.

Chicago is well billed for the show and it is expected that just as the attendance at the New York show eclipsed that of all previous exhibitions, the coliseum will, opening night and throughout the week, be similarly jammed with record breaking crowds.

THE READERS' CLEARING HOUSE

CRANK ARRANGEMENT

Three Rivers, Mich.—Editor MOTOR AGE—What horsepower should one get from a double-cylinder $4\frac{1}{2}$ by $4\frac{1}{2}$ -inch gasoline engine, with automatic inlet valves and the cranks both on the same side of the crank shaft, the engine running at 900 to 1,000 revolutions? Which is the better crank shaft arrangement, with the cranks together or at 180 degrees? What should be the size and weight of the flywheel of this motor?—F. W. ABBOTT.

The flywheel should have an outside diameter of 20 inches and a rim weight of 75 pounds. This will be sufficient to prevent stalling in case of a sudden application of the clutch. There will be no difference in the developed power for the two crank settings. Running at 1,000 revolutions per minute, the motor should develop 12 horsepower. The motor will have a better balance with the cranks set at 180 degrees.

TIMING VALVE ACTION

Arcata, Cal.—Editor MOTOR AGE—The maker of a runabout with a 5 by 5-inch single-cylinder, horizontal motor, gives the following directions for setting the valves: "The exhaust valve closes 1-32-inch after the center—that is, after the piston has gone down the cylinder 1-32 inch—and 1-32-inch after this the inlet opens and remains open till the piston has started back $1\frac{1}{2}$ inches on the compression stroke; on the exhaust stroke the valve opens 5-16 inch before the center and closes 1-32 inch after the center."

I have been taught that in a motor of 5-inch bore and stroke for high speed and power the inlet valve should open very soon after the center and remain open until the piston reaches the other end of the cylinder, or between the center and $\frac{1}{8}$ inch after the center; while the exhaust valve should open from $\frac{5}{8}$ to $\frac{3}{4}$ inch before the center and close on the center. I have reset the valves on the car in question and get more power and speed

out of the machine than it ever developed before. Why does the maker give the valve setting directions quoted?—H. A. REED.

MOTOR AGE does not know why the exact positions of valve openings stated are used by the maker in question, but the timing in general is what has been found best. The exhaust valve opens before the piston is clear out to tend to reduce the cylinder pressure before the piston starts back, thus lowering the pressure necessary to force the burned gas out of the cylinder. In this connection it can be said that the first and last one-tenth of the impulse stroke produces but little result on the crank shaft on account of being in practically a straight line. The exhaust valve closes after the piston reaches the cylinder head end, so as to allow the inertia of the exhausting gas to tend to reduce the pressure in the cylinder below atmospheric, which is an economy gain. The inlet valve is held open on the return stroke so that the inertia of the inlet gas, by virtue of its high velocity, will get a larger charge into the cylinder. This has been found to occur in spite of the fact that the piston is already on the return stroke. The opening of the exhaust $\frac{5}{8}$ inch from the end is much better than 5-16 inch, and holding the inlet open during $1\frac{1}{2}$ inches of the compression stroke is quite excessive. Five-eighths of an inch would be right for this also, unless the motor rotated at a very high speed.

AIR-COOLED MOTOR

Bowling Green, O.—Editor MOTOR AGE—How much sooner will an air-cooled cylinder wear out than a water-cooled cylinder? Will splash lubrication give the pistons of a vertical cylinder sufficient oil? What is the best kind of oil for an air-cooled motor?—C. URSCHEL.

If properly lubricated and cooled there is no reason why an air-cooled motor should wear out any quicker than one water-cooled. Unaided, splash lubrication is hardly satisfactory.

ANTI-FREEZING COMPOUND

Lindsborg, Kan.—Editor MOTOR AGE—I have been experimenting with glycerine and water for gas engine cooling, and find that a 25-per cent solution freezes at zero, a 33 1-3-per cent solution at 10 below and a 50-per cent solution remains liquid at the lowest temperature we have had here, 14 below.—A. E. AGRELIUS.

OPPOSED PISTON MOTOR

Hartford, Conn.—Editor MOTOR AGE—Please explain the construction and operation of the Gobron-Brillie engine, which I understand has two pistons in each cylinder. What is the "synchronized" ignition used on the Napier, and how does it differ from other ignition systems? An engine of $2\frac{3}{4}$ -inch base and $3\frac{1}{4}$ -inch stroke is rated at $2\frac{1}{4}$ horsepower. What should be the size of the valves, how far should they open, and at what speed will the engine develop its rated power?—J. J. O'CONNOR.

The Gobron-Brillie motor has two pistons in one cylinder, both arranged to attach to the crank shaft and move yet in opposite directions. The bottom piston is connected like that of the ordinary motor, while from the upper piston there are arranged vertical side rods which attach to the crank shaft. The explosion takes place between the two pistons, forcing them in opposite directions. The valves are between the pistons, also, and are operated as those of the ordinary four-cycle motor. The Napier synchronized ignition is the use of one coil and a distributor which passes the current to the proper plug terminals. This arrangement produces the spark at the same point, relative to the piston movement, in each cylinder. At 1,000 revolutions a motor of $2\frac{3}{4}$ by $3\frac{1}{4}$ -inch bore and stroke will develop 1.6 horsepower. To develop $2\frac{1}{4}$ horsepower the speed would have to be about 1,500 revolutions per minute. The valves should be $1\frac{1}{2}$ inches in diameter and open $\frac{1}{4}$ inch.

PERTAINING TO THE LAW



City Council Refuses—The bill introduced in the city council of St. Louis, through the agency of the local club, to properly adjust the automobile tax, was not politely received. The result is that St. Louis motorists have been compelled to pay \$10 each for the privilege of driving their cars this year.

Bumped the Cabby—An interesting decision was rendered a few days ago by Judge Fogarty, of New Orleans, La., in favor of the owner of a sight-seeing automobile and against a cabman. The passenger agent of the Louisville and Nashville Railway Co. had allowed the owner of a sight-seeing automobile to place the machine in front of the offices of the company during certain hours. An old time cabman took the place while the automobile was on a trip and when it returned refused to make place for it, claiming the cab should have precedent. The case had to be taken to court and Judge Fogarty in his opinion said that inasmuch as the railroad agent had given permission for the automobile to stand in front of his office the cabman had no right to take the place.

Farmer Bills—Two representatives of Connecticut have presented to the legislature petitions which, if passed, would bar motor cars from the highways. The bill of Representative Briggs, which is endorsed by more than 100 signatures of farmers, states that the roads are in many instances narrow, that they have many sudden and dangerous turns and that on account of the easy way in which horses are frightened at a motor car the latter should be barred from the use of the roads. Furthermore these machines are pleasure vehicles, used by a small number of people in comparison with the number who use horse-drawn vehicles, and this constitutes another good reason for them being barred. The second petition, which is from Representative Barnes, and bears the signature of many farmers, is almost identical with the Briggs affair.

Favor Reasonable Legislation—Measures looking toward the regulation of automobiles in the matter of their operation in Wisconsin, which have been introduced by bucolic brethren from the haygrowing prairies, will not meet with the entire approbation of Milwaukee automobilists. That is not saying, of course, that they will put up a fight against such proposed legislation more than what might be termed a long-distance encounter. But the motorists of Milwaukee have taken occasion, at least, to express their opinions. They want "reasonable legislation," but if they do not say any more than this it will be difficult for the legislators—especially those that are more accustomed to the use of a yoke of oxen than to a motor car—to decide what "reasonable legislation" consists of. Promise is made, however, of an active fight against the multitude of unsavory bills that are being presented at Madison. The plan that has been suggested is the formation of a state association. Active steps toward forming such an association have already been taken. The bill against which the greatest

opposition is raised at present is that introduced by Assemblyman Turner. Many claim that this bill is so radical that it will fall of its own weight and that it would be unconstitutional even if it passed. It is not expected that this bill will go before the legislature for action before several weeks have elapsed. Since the annual meeting of the Milwaukee Automobile Club, held a short time ago, it has been claimed that fighting blood has been instilled into the management of the organization and that the present administration will see any measure projected through to a successful finish.

Troubles Never End—Automobilists are considerably interested in an ordinance which has been introduced in the Pittsburg council by J. O. Bockstoe. The ordinance came before the finance committee, the excuse for it being that it contained a provision for the licensing of automobiles, although there is a general ordinance requiring all vehicles to pay a license fee. The ordinance provides for a number of restrictions regarding the running of automobiles. It limits the speed in built-up portions of the city to 6 miles an hour. It requires that suitable provision shall be made to prevent unnecessary noise from escaping steam, that proper signals be displayed and that certain laws of the board be observed. The owner of a car with the capacity of only two persons shall pay \$6 a year and of more than two persons \$10 a year. This ordinance if passed is likely to result in much hard feeling and give rise to no end of disputes owing to the fact that automobilists think they are taxed enough now to the somewhat indefinite provisions regarding speed territory.

What Does He Smoke?—Rev. R. E. Hawley, of Cambridge, Ind., suggests some radical changes in the automobile ordinances of Indiana. He believes a bill should be passed by the legislature requiring the appointment by the county commissioners of an expert machinist and that he should examine every automobile for which a number is asked. The number as well as the name of the county is to be painted on the car. All persons wishing to drive a car should pass an examination and people who drink should not be permitted to drive under any circumstances. Any one exchanging his number or license is to be imprisoned. On streets and roads where railroads or electric lines are in operation automobiles should not be allowed. A whistle or fog horn should be used instead of a gong. Each city or village should have the right to regulate speed within its territory. The license fee for every car should be \$500 per year and \$500 for every driver. Every machine should be examined by a special inspector during the first week of every month and if repairs are needed they must be made in his presence and under his instructions. If this is not done immediately the car should be held and locked up for a month, and should the owner be unwilling or unable to furnish the repairs the car is to be destroyed without recourse for damages. The inspector must not be connected in any capacity with an automobile factory or a supply house, and

should he be found guilty of receiving a fee or a present from a concern he should be imprisoned. The speed on the roads outside of villages and cities should be 5 miles an hour through the state. Visiting motorists from other states should pass through the same regulations as the owners and drivers of Indiana.

Damage Case on Trial—A case of great interest to automobilists is on trial in the Supreme court at Utica, N. Y. The plaintiff is Mrs. Jerome LeGrange, of Dunbarton, and the defendant is Daniel M. Tuttle, of Canastota. Action was brought to recover \$5,000 damages for injuries received July 16, 1903. As Mr. Tuttle and his party were driving along the road they saw Mrs. LeGrange alight from her carriage, go to the head of the horse and lead him to the edge of the meadow. Mr. Tuttle says Mrs. LeGrange made no sign that she wanted him to stop and he continued. Mrs. LeGrange claims she shouted to him to stop. As the automobile approached the horse began to jump, throwing the plaintiff down and injuring her severely. Mr. Tuttle went back and assisted her to get into the buggy and she drove off. She discovered that she had been more severely injured than she at first supposed and brought the action.

Do Not Favor Change—Efforts are being made to change the automobile law in Minnesota, although there has been no concerted movement to amend the law under which the state has regulated automobiles during the past 2 years. Two bills were introduced in the legislature last week, one designed to amend the present law and the other to supersede it. The amendatory bill makes but slight changes in the present Minnesota law. It provides that the speed limit of 8 miles shall be reduced to 5 miles whenever the car is passing a horse; and makes it obligatory upon the automobilists to render all possible aid to anyone who is injured by his car. The bill also provides that the number of the license must be painted on each side of the car in 4½-inch letters. The substitute measure is an elaborate affair, which changes the entire law, and winds the automobilist up in a tangle of rules and regulations which will drive him crazy—that is, if enough officials can ever be secured to enforce them. The one commendable feature of the bill is that it makes the state license fee of \$2 payable to the secretary of state, instead of to the boiler inspectors, who, under the present law, pocket one-half of it. The bill confers upon the boards of county commissioners of the various counties power to make their own speed rules, and gives them the power to enforce them. Nice little signboards, artistically painted to correspond with the surrounding shrubbery, will be placed ½ mile from each village, with the gentle reminder "Slow down to 5 miles." When you cross a dam or causeway, you are also supposed to slow down to 5 miles. If you pass a little red schoolhouse between the hours of 8 in the morning and 4 in the afternoon, if you cross an intersecting highway, pass a cow, horse, pig or person, you are not supposed to travel more than 8 miles an hour. Lamps, horns, bells, numbers and other technical matters are cared for in the bill. It is a noticeable fact that both automobile bills this year come from southern Minnesota, where the country roads are finest.

THE MAKERS

One Car Per Man—It is said A. Clement of Paris, who makes the Bayard-Clement, employs 1,600 men in his factory, and that it is expected 1,200 cars will be constructed for this season's trade.

Joined Rubber House—C. C. Boynton, formerly with the Worthington Automobile Co., has accepted a position as special representative of the Continental Caoutchouc Co. He will visit manufacturers and distributing agents in the country.

Southern Branch—Clarence Kessler & Brother of Washington, D. C., makers of automobile, carriage and bicycle supplies, have decided to open a warehouse in Savannah, Ga., whence business in the states of Georgia, Virginia, North and South Carolina and West Virginia will be handled by traveling men.

Changed Name—The Autocar Equipment Co., of Chicago, manufacturer of Continental motors, transmission gears, carbureters and other appliances, has changed the name of the concern to that of Continental Motor Mfg. Co. The concern will continue to occupy its present location at 240 to 244 West Lake street.

Election and Banquet—The Franklin company of Syracuse, N. Y., at its annual meeting elected the following officers and directors: President, Alexander T. Brown; vice-president, W. C. Lipe; secretary, H. K. Chadwick; treasurer and general manager, H. H. Franklin; directors, H. H. Franklin, Alexander T. Brown, W. C. Lipe, John Wilkinson, H. K. Chadwick, Giles H. Stilwell and A. J. DeMott. After the meeting the stockholders and directors had their annual dinner at the Century Club. The report for the year showed a prosperous business with a good prospect for 1905.

Matheson Incorporates—The Matheson Motor Car Co., of Detroit, Mich., and Holyoke, Mass., has filed articles of incorporations, the concern being capitalized at \$600,000. Of this amount \$200,000 is 7 per cent preferred stock, subject to redemption within 3 years. Clarence U. Clark, of Grand Rapids, Mich., who holds 5,000 shares in preferred stock, is vice-chairman of the concern; Frank E. Matheson is secretary and E. A. Hinchman, of Detroit, is treasurer. H. Robinson of Seattle, Wash., has 10,000 shares of preferred stock; C. W. and F. F. Robinson have 10,850 shares. George Clapperton and J. K. Kalmbach have respectively 15,000 and 10,000 shares of common stock.

And Still Growing—The inauguration of a third additional building to the already large plant of the Minerva Motor Co., of Antwerp, Belgium, which took place December 28, was one of the important events of the year in the automobile world of Belgium. The minister of industry, the governor of the province, the mayor, several councilmen, besides other manufacturers and guests, were at the ceremony. At first the concern made bicycles, and in 1897 started to make motors, turning out one a day the following year. In 1902 the production was fifteen a day, while a year later the concern was able to finish thirty-five motors every day. From a force of about a dozen men employed about 5 years ago the factory has become so important

that 1,500 men are employed at present. The output for 1905 is figured at 5,000 motors for motor cycles, 500 motor cycles and about 500 Minerva motor cars.

Business Growing—On the last day of the year 1903, the Continental Caoutchouc and Gutta Percha Co., of Hanover, Germany, employed 2,741 people, while in December, 1904, the concern employed 3,294 persons.

Good Dividend—The Bielefelder Maschinenfabrik Gesellschaft, formerly the Durkopp Co., which makes Durkopp motor cars, announced a profit of \$323,522 for the past season. A dividend of 28 per cent was distributed to stockholders.

New Coast Concern—The Duck Cycle and Motor Co. was recently organized in Oakland, Cal. The concern, which is capitalized for \$25,000, will make automobiles, motor cycles and bicycles. A. W. and H. A. Duck, E. M. Rackliffe, M. H. Weed and Ben F. Woolner are interested in the concern.

Kaestner Officers—At the election of officers for this year of the Charles Kaestner Mfg. Co., of South Bend, Ind., manufacturer of motors, transmissions and other automobile supplies, John G. Libstein, Jr., was elected president; Adolph Kaestner, vice-president; Edward B. Reynolds, treasurer; Charles D. Cutting, secretary and general manager. These officers and Otto Knoblock form the board of directors.

Wilson Retires—T. H. Wilson, who was president of the Wilson & Hayes Mfg. Co., of Detroit, Mich., manufacturer of radiators, tanks, metallic bodies and other metal specialties, has retired from the concern and the latter's name has been changed to that of Hayes Mfg. Co., with H. Jay Hayes, as president and general manager; E. F. Schultz, vice-president; Herbert P. Carrow, secretary and treasurer, and B. H. Thompson, superintendent. A branch factory will be erected in Lansing, Mich., and additions will be made to the Detroit factory. An enameling plant was recently installed also new machinery.

Stearns Enlarges—The F. B. Stearns Co., of Cleveland, is making important changes for the coming season. It is erecting a two-story addition 50 by 130 feet adjoining its present factory; also a stock room 40 by 50 feet and an office about the same size. It is installing a number of machine tools and other equipment so that its facilities for turning out cars will be about double what they have been in the past. A New York branch is to be opened within a few days. A show room will be located in the American Journal building, corner Eighth avenue and Fifty-eighth street, and a garage and repair shop will be opened in another location not yet decided upon. The branch will be in charge of George F. Woolston, formerly of Woolston & Brew. James F. Patton, of this city, who accompanied F. B. Stearns on his endurance run trip from New York to Pittsburgh, will act as salesman and demonstrator at New York. It is probable that a store will be opened in Cleveland, but this has not been decided upon.

CLUB AFFAIRS

Members Coming In—Within 10 days thirty applications for membership have been received by the Automobile Club of California. An active campaign to have a membership of 500 has been started by the members of the organization. The annual dinner will take place between February 20 and 28.

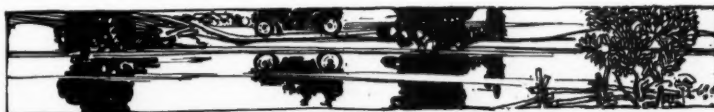
Condemn Reckless Driving—The Oshkosh Automobile Club of Oshkosh, Wis., held a meeting January 26, at which resolutions were passed against reckless driving in the city. It was decided to help the authorities in enforcing the automobile ordinance, although the club thinks it is unfair and unreasonable in some respects.

Meeting in March—Frederick H. Elliott, of Syracuse, N. Y., secretary of the New York Automobile Association, was in Buffalo last Saturday regarding the annual meeting of the directors. It is probable that Friday, March 10, will be selected for the meeting. The directors will canvass the situation as to legislation affecting motorists in the state. Good roads will be discussed.

Quakers Will Banquet—A number of automobilists of national renown will be banqueted by the Automobile Club of Philadelphia at the new Bellevue-Stratford hotel on February 11. Among the guests of the occasion will be Winthrop E. Searritt, James B. Dill and C. H. Gillette. Besides local automobilists the Quaker mayor, John Weaver, will assist in entertaining the visitors and is down for a speech. It is expected this affair will do much good for the club.

Carry Reward Signs—At the annual election of officers of the Colorado Automobile Club, held in Denver January 26, the following officers were elected: Dr. F. L. Bartlett, president; Bryan Haywood, vice-president; W. H. Bergtold, secretary; Louis Searing, treasurer. J. W. O'Connor, E. P. Hershey and B. B. Brown were named for the executive committee. At the meeting it was decided to organize an automobile school for members, of which there are 200. In order to prevent tampering with motor cars it was decided that every member will be furnished with a brass plate, which is to be fixed on club member's machines. A notice of reward for the arrest of anybody who tampers with a car will be written on the plate in a conspicuous manner.

Has Definite Policy—Although when President Knoll of the Automobile Club of Buffalo was elected to office in December, there was nothing in the conditions to make necessary a platform or a sharp division of parties in the club, Mr. Knoll has chosen his own platform and has mapped out a policy which the organization will follow. The program as voiced by Mr. Knoll to a MOTOR AGE man is to make the club the largest in America, to add to the treasury, to make more friendly the relations between automobile drivers and the city authorities, to conduct race meets, to make visits of touring automobilists pleasant and comfortable, to aid the good roads movement, to give members reliable information regarding touring conditions. Mr. Knoll also sympathizes strongly with the movement, which has been suggested, rather than started to give the club a club house outside the city limits.



FROM THE FOUR WINDS



MOTOR STAGE IN NEVADA MINING REGIONS—SERVICE BETWEEN GOLDFIELD AND TONOPAH

Want Wide Tires—Reading, Pa., road drivers will introduce a wide-tire ordinance in the legislature.

Sold Cheap—After having been stored 6 months, the three automobile buses which were used in Bloomington, Ill., last year during the street car strike were sold a few days ago for \$701.

Winners One Make—The fourth annual motor cycle road race for the Brugier cup was run in southern France. The distance covered was 125 miles and the three first who finished the race all rode 5-horsepower Griffon machines. The winner averaged a speed of 38½ miles per hour.

Southerners Are Buying—According to southern newspapers Miami, Fla., is fast becoming a popular automobile center. There are already ten cars owned by its inhabitants and more are being bought. A favorite trip made by the local motorists is from Miami to Fort Lauderdale, a route 26 miles long, which passes through fruit groves and beautiful vegetable land.

Hopes for the Track—It is possible that the long-talked-of automobile race track will be built in France this year. Those interested in the project wrote to the former war minister, inasmuch as the track is contemplated to be made on the military camp of Chalons, 110 miles from Paris. This camp is used annually for important maneuvers, and the minister answered that if the track would not interfere he would recommend to the government that permission be granted.

Exclusive Motor Cycle Show—A motor cycle show will be held in Muskegon, Mich., April 1 to 4, in one of the largest halls of the Michigan town. Already twenty spaces have been rented and it is expected more will be taken. Dr. C. J. Dove of the local motor cycle club will be at the Chicago automobile show, where he will try to interest the motor cycle exhibitors in the Muskegon show. It may be mentioned that in proportion to its population there are more motor cyclists in the Michigan locality than in any other town in the United States.

Will Tour California—Mr. and Mrs. A. L. Spitzer and Mr. and Mrs. E. B. Libbey of Toledo, O., and Mr. and Mrs. E. Leyden Ford of Detroit, automobile enthusiasts, have left for California, where they will spend the remainder of the winter, touring the state.

The party will have its headquarters at Pasadena.

Sold Motor Wagons—The receiver for the Auto Express Co., of Toledo, O., last week sold the motor express wagons to the Lichtie Automobile Co., of that city.

Horse Men Assist—At a recent meeting of the Des Moines Driving Club of Des Moines, Ia., the members decided to co-operate with the Iowa Automobile Club in obtaining the betterment of the state roads.

What Next Year?—According to a speaker at the recent banquet of the Automobile Club of America there was one automobile to every 1,500,000 inhabitants in the United States in 1901; 2 years later the proportion was 1 to 6,500 inhabitants and now there is one car to every 1,200 inhabitants.

Chauffeurs Have Home—The Philadelphia branch of the Chauffeurs' Association of America is evidently a thriving and wide-awake organization. Not only has it a club house of its own, but its membership roll contains over 125 names. A banquet last week was the first of a series of entertainments intended to while away the tedium of the long winter days and nights. The club house is located at 1519 Vine street.

Interest in New Zealand—An automobile dealer of New Zealand recently gave information about the trade in that country. In 1900 a few small cars, mostly Benz, were imported, while during the following 2 years Oldsmobiles were imported and sold well in several large cities. Then the Darracq made its appearance and found favor. Among the American machines seen are Rambler, Ford, Orient, Northern, Conrad and Oldsmobile, while from England a great many de Dion-Bouton, Humber and Simms-Welbeck cars were imported. More recently the Clement-Talbot and a number of minor French-made machines were being sent over in large quantities. In general the roads are not good. Near Wellington and Dunedin the country is hilly and there are not many cars, while in Auckland and vicinity there are fine roads. The best roads are to be found near Timaru, Invercargill and Omaru, where the largest number of cars is to be found. In Christchurch there are many motorists and the largest garages and most important importers. There are several important automobile clubs, of which the Canterbury Automobile

Association is probably the largest, having about seventy-five members.

Only Two Makes?—At the Paris salon the wheels of 1,598 automobiles and motor cycles were equipped with a French tire, while 728 wheels of other machines had a German tire.

Queen a Scorcher—It is reported that the queen of England has become a scorcher, although she started automobiling quite recently. She is reported to have ordered a powerful machine for her personal use and will go touring during the summer months.

Invited the King—A committee of the automobile show of Turin, Italy, visited the Italian minister of commerce and invited him to be present at the inauguration of the salon. The minister promised to be present and also promised to make a special call on the king and invite him in the name of the committee. It was announced that the king would be at Turin on the inauguration day, provided no important government matters are scheduled for the same day.

Selected Longer Course—The Autocycle Club of France has decided that the distance from Paris to Bordeaux, about 350 miles, is not long enough for an endurance competition for motor cycles. A circuit of about 1,000 miles has been selected, starting from Paris and passing through such important cities as Lyons, St. Etienne, Marseilles, Toulouse, Orleans and back to Paris. The start will be made May 4 and the return to the starting place is scheduled for May 12.

Step for Good Roads—Automobilists have an interest in the bill making appropriations for the department of agriculture during the fiscal year 1906, now pending in congress, as it carries an appropriation of \$40,000 to enable the secretary of agriculture to make inquiries in regard to the systems of road management throughout the United States; to furnish expert advice on road building; to make investigations in regard to the best methods of road building and the best kinds of road-making materials in the several states.

Where Gasoline is Costly—A Frenchman residing in Durban, Natal, South Africa, says that 4 years ago there were only two automobiles in the town, while at the end of last year there were twenty-eight cars, mostly English. The increase in the use of motor cycles is still more remarkable, there being about fifty machines now as compared with less than half a dozen in 1901. The country roads are generally fair and frequently business men travel to Johannesburg, which is located 1,000 miles away. Fuel can be bought for 10 to 12 cents per litre—2.1 pints.

Americans Best for Him—One of the latest converts to motoring in Buffalo is Charles W. Goodyear, who, before he withdrew from the contest was the chief candidate for the democratic nomination for governor of New York last fall. Mr. Goodyear is a millionaire with big railroad, lumber and mining interests. Accompanied by an expert mechanical engineer employed on one of his railroads, Mr. Goodyear went to the national and importers' shows in New York and after canvassing the exhibits carefully came to the conclusion that American cars are better investments for Americans than are the European makes. The day after his return to Buffalo he bought two Pierce cars.

Good Average Going—A party of automobilists from San Francisco, Cal., recently traveled to Pasadena, a distance of 588 miles, in less than 32 hours, or an average of about 18 1/4 miles per hour.

Doom of the Tram—The London Motor Omnibus Co., which was recently organized, contemplates purchasing seventy Miles-Daimler buses for service in London. The officials figure that each car will net a profit of about \$22 per week and that \$80,000 will be the profit at the end of the year.

Wants a Franchise—W. B. Phinney has been endeavoring to secure the consent of the authorities of Geneva, N. Y., to establish a motor car route on the streets of the city not used for street car lines. He wants to run motor cars from Geneva to several of the surrounding villages not reached by the trolley cars.

Crossed the Andes—According to a cablegram from Buenos Ayres, a remarkable trip was recently made by Ramon Camano and a party of friends in an Oldsmobile. They started for Chili and after having gone several hundred miles through rough pampas roads made the ascent of the Cordillera Mendoza, on the Chilean side of the Andes moun-

tains. At the point where the car crossed the mountain the latter is 13,000 feet above the sea and as the roads or rather pathways are in bad shape the feature was considered remarkable. Furthermore this is the first time an automobile has crossed the Andes.

Chicago to Seattle—Ralph D. Hopkins, of Seattle, Wash., recently arrived in Santa Barbara, Cal., on his way to his home town. He is traveling in a Locomobile, which he purchased in Chicago, from which city he drove the car to New Orleans, about 2,000 miles. After shipping the machine to Los Angeles, he again started to drive it on its way to the Washington city. Hopkins experienced great trouble with tires and said his expenses in this connection had been very high.

Mixed Reliability Trial—The Automobile Club of Austria has decided to arrange an automobile endurance run in May over a distance of from 325 to 500 miles. The awards will be made on points and the following will be taken in consideration by the committee on awards: Regularity of the transmission, average speed, speed in climbing hills, speed on level ground over a distance of 1 kilometer, fuel consumption, consumption of water for cooling purpose, condition

of tires, comfort of the body and price of chassis. All styles of gasoline cars will be allowed to compete and will be divided into classes according to price and number of cylinders. There will be three prizes in each class.

Eleven-Year-Old Driver—Edward S. Esty, of Brookline, Mass., is probably the youngest licensed automobile driver in the United States. He is 11 years old, and was given an operator's license by the Massachusetts highway commission after an hour's test with a 24-horsepower Peerless car owned by his father. The lad had to drive the car through the crowded streets of Boston and then along the narrow and steep road on Beacon hill, which he did successfully.

Getting Enthusiastic—It is said President Loubet, of France, has only twice ridden in an automobile, the first time being in 1900, when he was given a short ride in an electric car, and the second time on the occasion of the recent salon, when he was driven a distance of less than 1/4 mile in a de Dietrich car, which had Gabriel at the wheel. The car went at about the speed of a horse trotting and the president is reported to have exclaimed: "I didn't know what speed was, but now I know."

CURRENT GOSSIP OF THE GARAGES

Has For 1 Line—W. B. Inks, of Ligonier, Ind., has taken the local agency for the Ford.

Hicks Takes Reo—The agency in Brooklyn, N. Y., for the Reo has been taken by E. Peter Hicks, who is located at 1384 Bedford avenue.

Half Oldsmobiles—Ramon Camano & Co., are the Oldsmobile agents in Argentine Republic, South America. They say that about half of the 150 cars in Buenos Ayres, the capital, are Oldsmobiles.

Garage in Church—Fay T. Randall, of Fort Wayne, Ind., has decided to establish a garage in that town. It will be located in the basement of the former Methodist Episcopal Church building, Berry street.

Centaur Has Columbia—The Centaur Motor Co., of Buffalo, has taken the agency for the Columbia, which formerly was sold by Stone & Mount. S. L. Stone of that firm has joined the Centaur forces.

Opening in March—The Autocar and the Winton will be handled in Wilmington, Del., by the Wilmington Automobile Co., which will be located in a new store on Tenth street sometime in March.

Garage at Clinton, Ia.—The Lamb Automobile Co., of Clinton, Ia., is to be incorporated for \$10,000. A new garage is being constructed and the concern will handle the Thomas, Cadillac and Waverley electric. V. A. Bonney will have charge of the place, which is owned by J. D. Lamb, president of the Lamb Boat and Engine Works, of Clinton.

Has Large Shop—The A. C. Stewart Automobile Machine Works, of Los Angeles, Cal., is one of the largest and best equipped establishments on the coast where automobiles are built and repaired. The Stewart-Garbutt racer, which is the fastest racing machine built on the Pacific coast, was made in this shop. From ten to fifteen men are generally em-

ployed in the shops, which are equipped with all necessary modern machinery.

Brooklyn Ford Agency—The Ford will be handled in Brooklyn, N. Y., by the Union League Automobile Co., which has opened a salesroom and repair shop at 33 Grant square.

Has Yale Agency—Frank A. Sanford, of Brooklyn, N. Y., formerly in the piano trade, has taken the agency for New York for the Yale, made by the Kirk Mfg. Co., of Toledo, O.

Buick in Buffalo—The agency for the Buick car in Buffalo has been placed with the W. C. Jaynes Automobile Co., which has in addition the Oldsmobile, Pope-Toledo, Winton and Pope-Tribune.

Has the Phelps—N. C. Mansir and C. R. Dunbar, prominent business men in Holyoke, Mass., have leased a large structure on Division street and will open a garage, salesroom and repair shop about the first of next month. The agency for the Phelps has been secured.

Chicagoans Have Renault—The Automobile Importing Co., which was organized in Chicago, Ill., several weeks ago, has secured the western agency for the Renault. The concern has taken temporary quarters in room 520 Tribune building, Madison and Dearborn streets. C. W. Gillett is president, H. L. Brand secretary and treasurer, and Paul Picard manager.

Russian Agents Here—Andrew Zemliczka and Nicolas Sommerfeld, the agents in Moscow, Russia, of the Oldsmobile, are in Detroit, Mich., where they will spend a fortnight at the Olds Motor Works, to study the construction of the cars made by the Michigan concern. Of the 150 cars which are in use in the Russian city, more than half are Oldsmobiles. The Russian agents have two places of business, one being a garage, the

other the salesroom and repair shop, where about thirty people are employed.

Newark Has New Place—A new salesroom has been opened recently in Newark, N. Y., by Turner & Emerson. They will handle the cars made by the Black Diamond company.

Good Dividends—The Montana Automobile Co., of Anaconda, Mont., has declared a dividend of 15 per cent on its capital stock. It is said the automobile business has been very prosperous in the gold state last year.

Minneapolis Trade Changes—Many trade changes have been made in the Minneapolis, Minn., field since the first of the year. A. F. Chase & Co., who have had the northwestern agency for the Oldsmobile for the past 3 years, have released the agency and it has gone to Winston & Walker, the Locomobile agents. Chase & Co., have taken on the Maxwell, and will push that machine through the northwest this year. The Pence Automobile Co. has added the Buick and the Mercedes to its big list of standard machines, and is opening with a big business. J. J. Barclay, who took on the Reo agency lately, has disposed of both the Reo and Premier agencies to George L. Gillette. Mr. Barclay has taken the Thomas, and will devote himself to the single agency. The agency for the Glide cars, which was held by the Barclay Automobile Co. last year, has gone to Smith & Zimmer. One of the biggest deals in the field this month is the incorporation of the Moulton-Jordan Motor Car Co. The company will carry on the business which has been conducted by E. H. Moulton, Jr. Mr. Moulton is president, Earl H. MacVicar vice-president, and Theodore C. Jordan secretary and treasurer. The company is capitalized at \$20,000. Within a short time the agency will be moved into a big new building, near its present location. The Peerless and Franklin lines will be continued.

WHY THE Perfected Dunlop Detachable Tire IS THE MOST DURABLE

It's the only Automobile Tire that can be and is completely steam cured



The DUNLOP began where mechanically fastened tires have left off.....The only Automobile Tire that does not require lugs or other mechanical fastening.

Look for sign "DUNLOP" at all Shows

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HARTFORD, CONN.

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New York (2)
Denver

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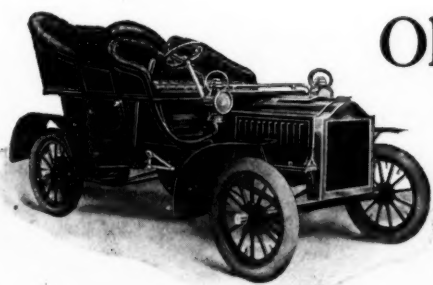
We Did It at New York

¶ We will out-do it at Chicago, in enthusiasm, in successful demonstration, in orders.

¶ Our line of light cars was the talk of every New York visitor—talk followed by investigation and conviction.

¶ When you visit the Chicago show we want you to investigate—we want to demonstrate to you the sterling merits of our cars.

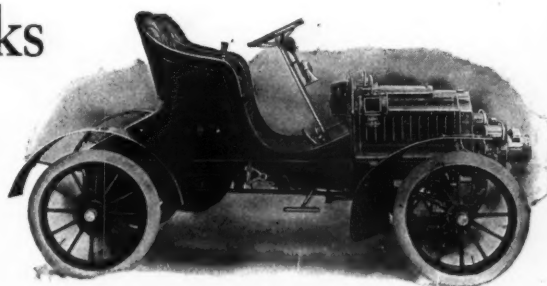
¶ Call and enter your name early for a ride in our two cylinder Touring Car or any other of our line in which you are interested.



Olds Motor Works

DETROIT, U. S. A.

Member A. L. A. M.



*As between two lines
choose the one
whose makers will
co-operate best with you.*

Setting aside for a moment the merits of the Orient cars—merits which a buyer cannot set aside when he considers them—let us consider just what co-operation usually amounts to.

Most manufacturers sell you as many cars as they can, and then spend a certain amount of money in the magazines. Perhaps they send you quite a few inquiries. They supply you with catalogues and some booklets, leaflets, etc.

Then they let you shift for yourself.

Here is what we are going to do :

We are going to have a good, big campaign in the magazines. We are going to furnish you with plenty of Orient literature.

And then we are going to spend a good many thousands of dollars in direct advertising by a special plan, that will send practically every one of the possible buyers in your vicinity right into your garage eager to talk motor cars.

That's the way we are going to push the Orient line.

That's the way we are going to co-operate.

Details if you say so.

Waltham Manufacturing Company

Members of Association of Licensed Automobile Manufacturers

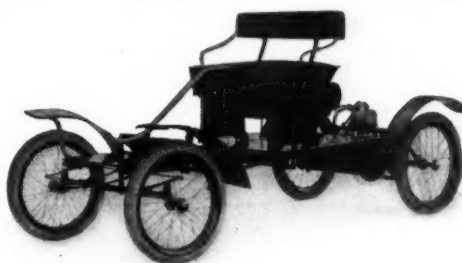
General Sales Offices: 44 Broad Street, New York City.

Factory: WALTHAM, MASS.

Did you notice in the daily papers that the water-cooled cars were freezing up down at Ormond?

Air cooling means non-freezing.

**The Simplicity of the Bicycle with
the Speed of an Express Train**



1905 Orient Buckboard

Model A, 4 H. P.

Price Only \$375

The Orient Buckboard for 1905

Only \$375

Where is There Anything to Touch It?

If you're a big dealer you know how many people you couldn't sell to, last year, because they "couldn't afford it."

Why don't you get ready for them, this season, with the Buckboards? Here's a practical machine, with snappy, stylish lines—simple as a bicycle—that will beat the average runabout to a standstill, and get away from more than half the touring cars, *and it sells for less than any other high grade motor car in the world.*

ONLY \$375

If you're not a big dealer, *make a start.* It doesn't take much capital to start a Buckboard business, and you can sell a dozen or two before the season is fairly open.

It isn't the time to hesitate—just get into the game and sell Buckboards.

We'll help—in fact we'll send the people right in to see you, by our great selling plan—a unique idea in direct advertising to the possible customer, through the mails.

See us at the Chicago Show—get a ride in the Buckboard—or write for our proposition.

Waltham Manufacturing Company

Members of Association of Licensed Automobile Manufacturers

**Factory and General
Sales Office:**

WALTHAM, MASS.

General Sales Offices (including Western Massachusetts and Connecticut)....44 Broad Street, New York City



They All Told Us

That the American trade and the
American public would not pay the
price of a truly high grade tire.

Our answer was

The Fisk HEAVY CAR TYPE Tire

**Which was made first
and priced afterward**

It costs more than any other because it is worth more.

It represents the finest workmanship and the very best materials
money can purchase.

Its success proves that just such a tire was wanted, particularly
with such a fastening as goes with THE FISK.

THE FISK RUBBER COMPANY

CHICOPEE FALLS, - - - - - MASSACHUSETTS

BRANCHES: New York, 754-756 Seventh Ave., Chicago, 52 State Street

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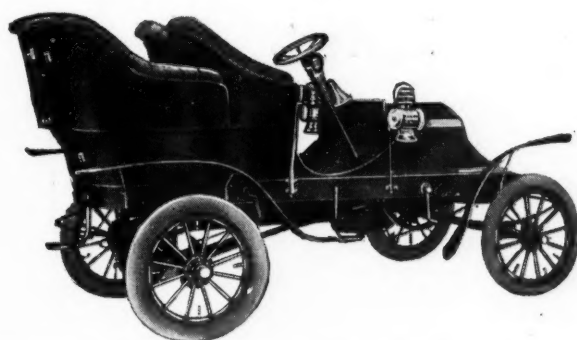
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From the very beginning, the Franklin has steadily led in the development of automobile construction. The following list of features which originated with the Franklin (many of which are still exclusive), shows how we have always pointed out the way:



Type B, 12 H. P. 4 Passenger, \$1,650

The first four-cylinder car manufactured in America.

The first to use automatic lubrication.

The first four-cylinder car to adopt automatic carbureter.

The first to build individual cylinder, four-cylinder engines.

The first to use elliptic springs without reaches.

The first flexible frame cars ever built.

The first to adopt the single intake trunk. Foreigners are now copying it.

The first to perfect throttle-control.

The first to adopt the round hood.

The first to make and to use a successful auxiliary exhaust.

The first to use the positive fan.

To say nothing of our distinguished success in bringing air-cooling from the position of ridicule to the position of honor and preference which it has begun to take this year, and will take more definitely as the season advances.

If you don't want to be out of fashion next year, or the year after, get the Franklin this year. There is no other way to avoid it.

THE H. H. FRANKLIN MFG. CO., Syracuse, N. Y.

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Thread Fabric

G & J TIRES

Most Durable

Fastest

Safest

The thread fabric construction removes all internal friction from the fabric, so that the tires do not heat up under the longest drives at the highest speed. That is why **G & J** thread fabric tires are the most serviceable automobile tires in the world.

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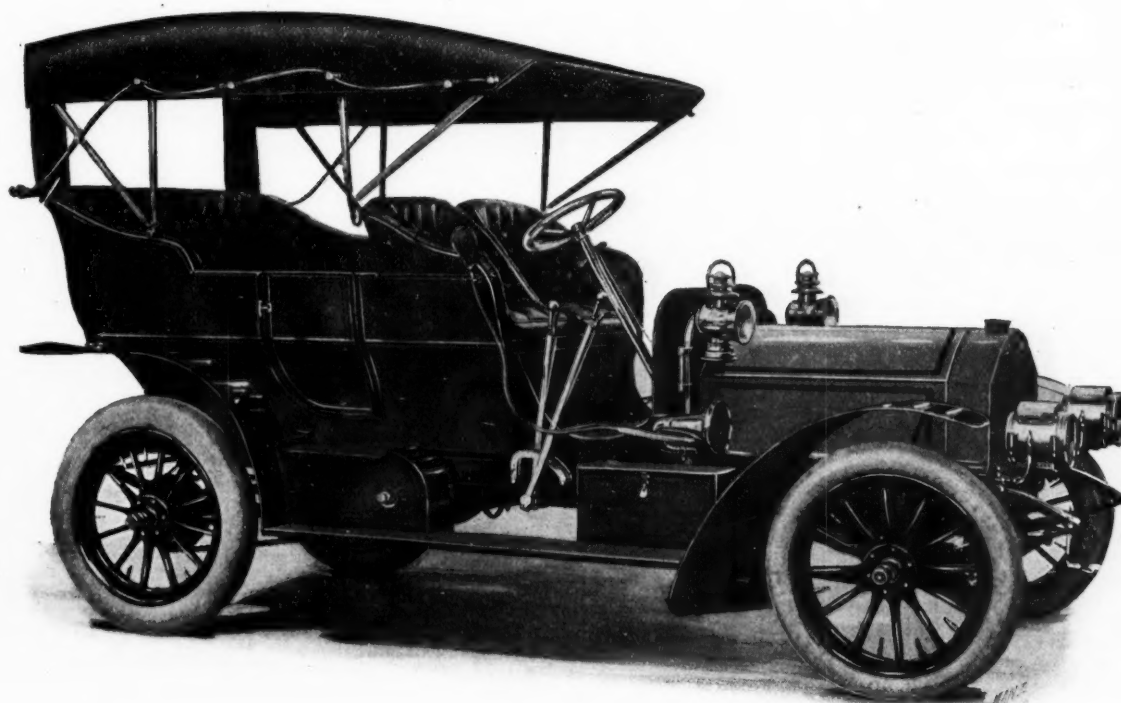
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The Fastest, Strongest and Lightest Built Touring Car in the World, of equal power.

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This Car has better material and workmanship and is better adapted to American roads than any French Car made. Our record of maintenance on these cars is lower than on any other high powered Car.

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394 Wabash Avenue, Chicago

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AGENTS WHO APPRECIATE

the value of the best selling tire that **stays sold** and gives the least trouble while in use, are invited to call at spaces 282 and 283, Coliseum, Chicago, and arrange for selling agency of **imported**



"THE
WORLD'S
BEST"

ontinental Tires



They are used on the following World Famous Cars: Mercedes, Rochet-Schneider, Decauville, Richard-Brazier, De Dietrich Leon-Bollee, Mors, Peugeot, Martini and other leading makes. American manufacturers furnish them when specified. Send for our specification blank and other valuable information to dealers.

Dept. **THE CONTINENTAL CAOUTCHOUC COMPANY,**
M. A. **298 Broadway, New York.** **FACTORY**
EMIL GROSSMAN, General Manager **Hanover, Germany**

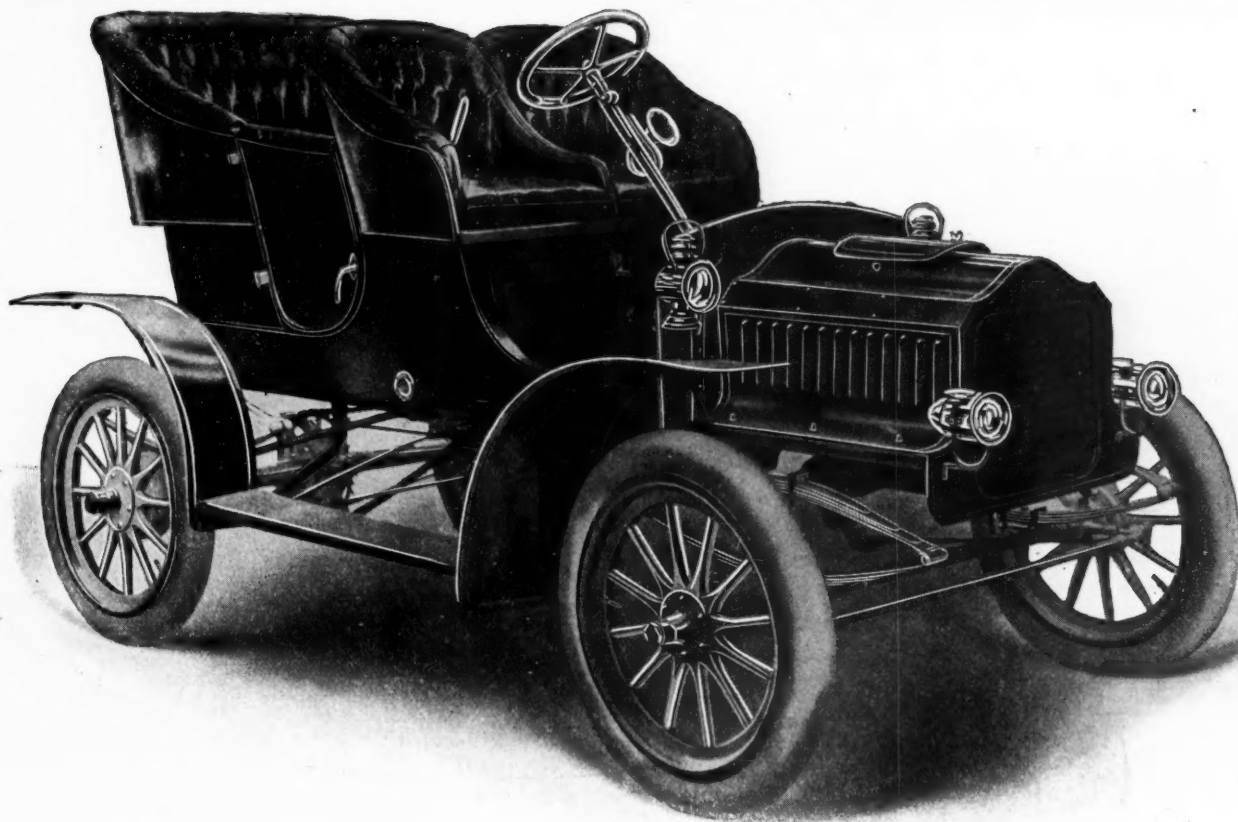
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Also Boston, Cleveland, Detroit, Buffalo and Washington, D. C.



FORD MODEL "F"

Model "F" has behind it the prestige of "Ford Success." It is designed for Automobile users who want a practical and useful touring car at a price which makes such a vehicle a profitable investment, rather than an expensive luxury. For actual reliability, attractive style and economy of maintenance the Ford Model "F" is easily ahead of any two-cylinder car made.

SPECIFICATIONS OF MODEL "F"

Price—\$1,200.00.
Weight—1,400 lbs.
Motor—Ford two-cylinder horizontal opposed.
Wheel Base—84 inches.
Tread—Standard wagon.
Wheels—30 inches.
Tires—3½ double tube optional.
Maximum Speed—35 miles an hour.

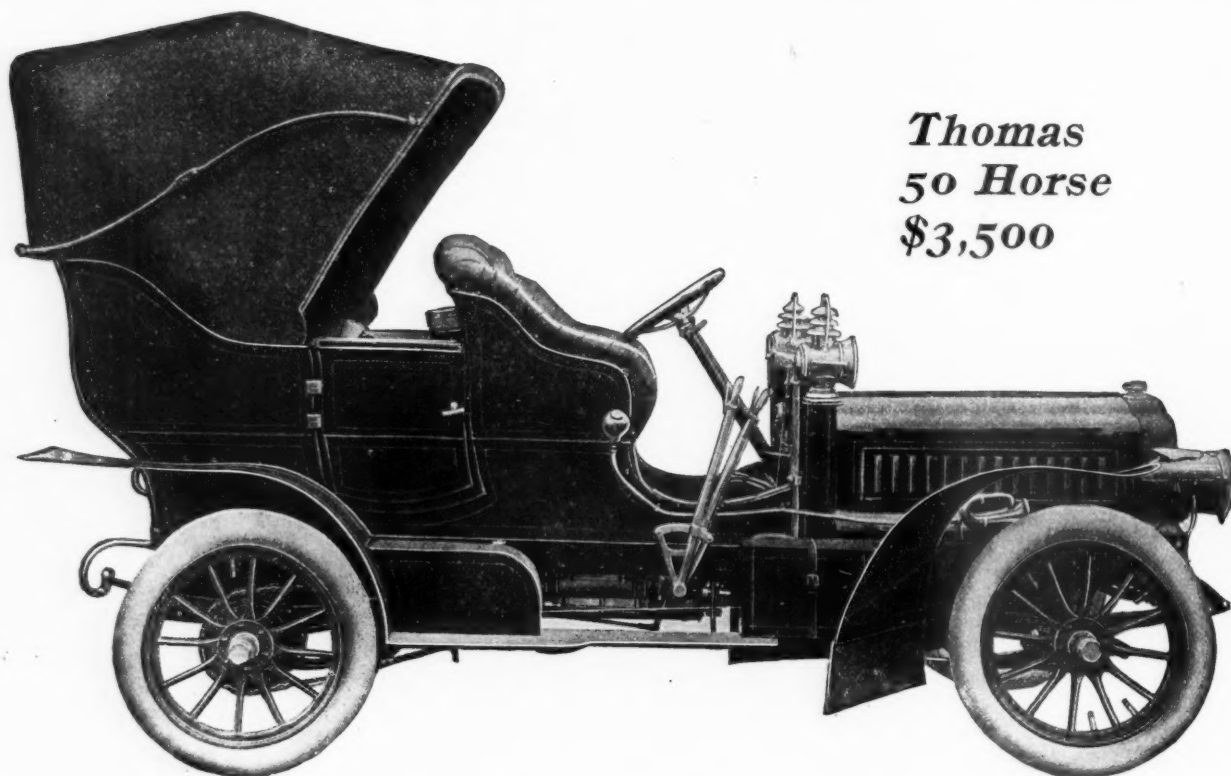
Capacity Gasoline Tank—9 gallons.
Capacity Oil Reservoir—3 pints.
Cooling Water Capacity—4 gallons.
Color—Rich, dark green, yellow running gear.
Upholstering—Black, of best leather, handsomely tufted.
Equipment—2 side oil lamps, post horn and necessary tools.

We want our friends, critics and competitors to examine this car. Full information about all our 1905 cars is given in our new catalogue. Send for it to-day and get posted on the most advanced types of American Automobile construction.

FORD MOTOR CO., = Detroit, Mich.

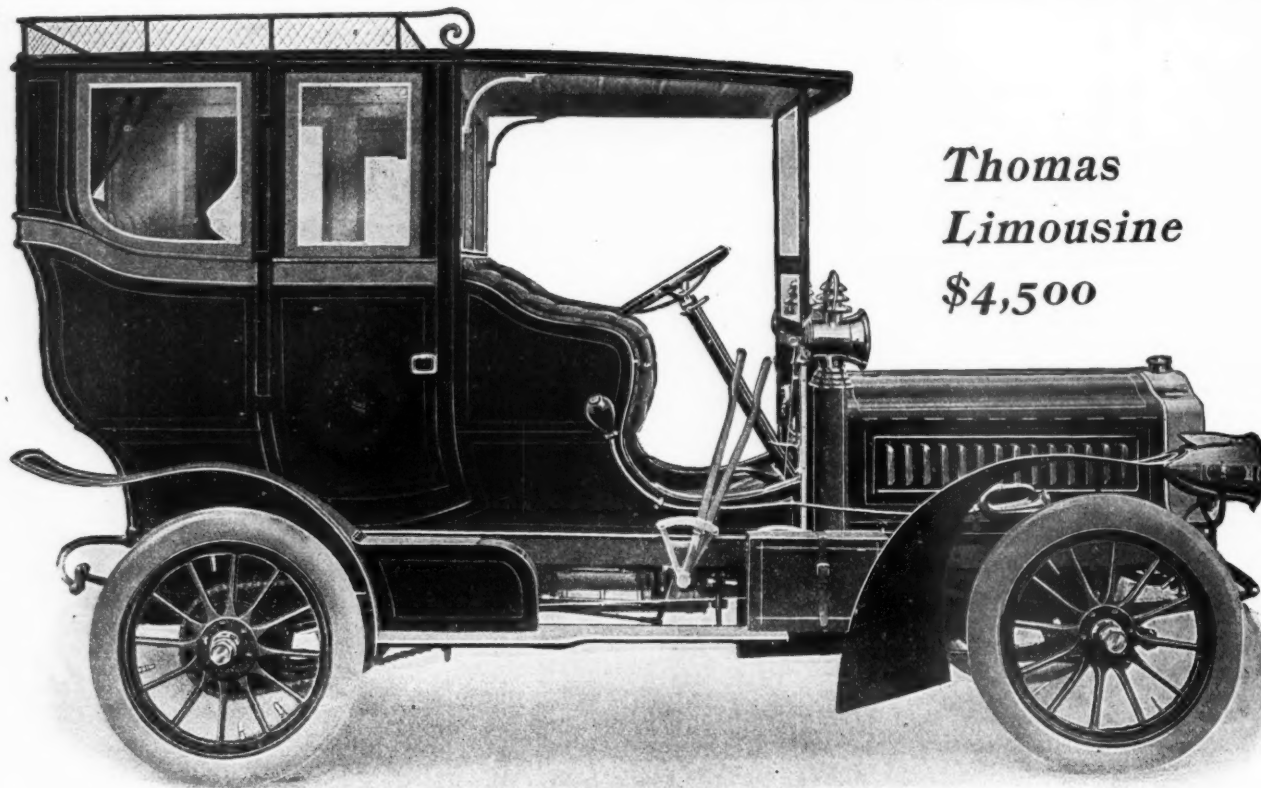
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The Cars That Made The Hit



*Thomas
50 Horse
\$3,500*

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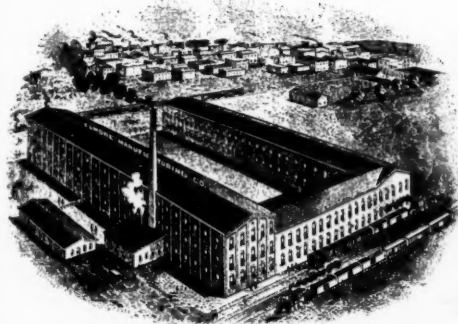
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No Pump

...NO NEED OF REMOVAL FROM RIM...

JUST GOODRICH TIRES

H. V. BECKER.
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ELMORE MANUFACTURING CO.



Clyde C. Jan. 4, 1905.

The B. F. Goodrich Co.,
Akron, Ohio.

Dear Sirs:

Percy F. Megargel, W.S. Harrison, of Rochester, N. Y., and Ralph Megargel of Scranton, Pa., ran an Elmore Pathfinder, - a machine having 16 horsepower and weighing, including passengers, baggage and extras, 2150 lbs. - from New York to St. Louis and back to Philadelphia, on a single set of Goodrich tires, not only without a puncture but without having to pump up the tires during the entire trip. This trip was begun on May 18th when the roads were almost impassable, and on the return trip, when passing through Pennsylvania, the rains had washed the dirt off the roads so that it was an almost continual run over rocks and stones. The severe service through which these tires went would be more appreciated by the perusal of the little booklet which the Elmore Company have gotten out, "The Cruise of the Pathfinder," illustrating and describing this wonderful tour.

The mileage on the first set of tires figures up to a total of about 3000 miles. This same car made the trip a second time but the rear tires were changed, not because the tires had given out, but they were worn some on the sides from continual traveling through deep ruts, and as the second run was made under the auspices of the Association of Auto Mfgs. and the cars were liable to a penalty unless a certain number of miles were made each day, it was deemed advisable to change the tires to prevent there being any possibility of delay from tire troubles, although there was no reason to believe that the original set of tires would not have been able to make the trip the second time.

Yours truly
Elmore Mfg. Co.
B. A. Becker

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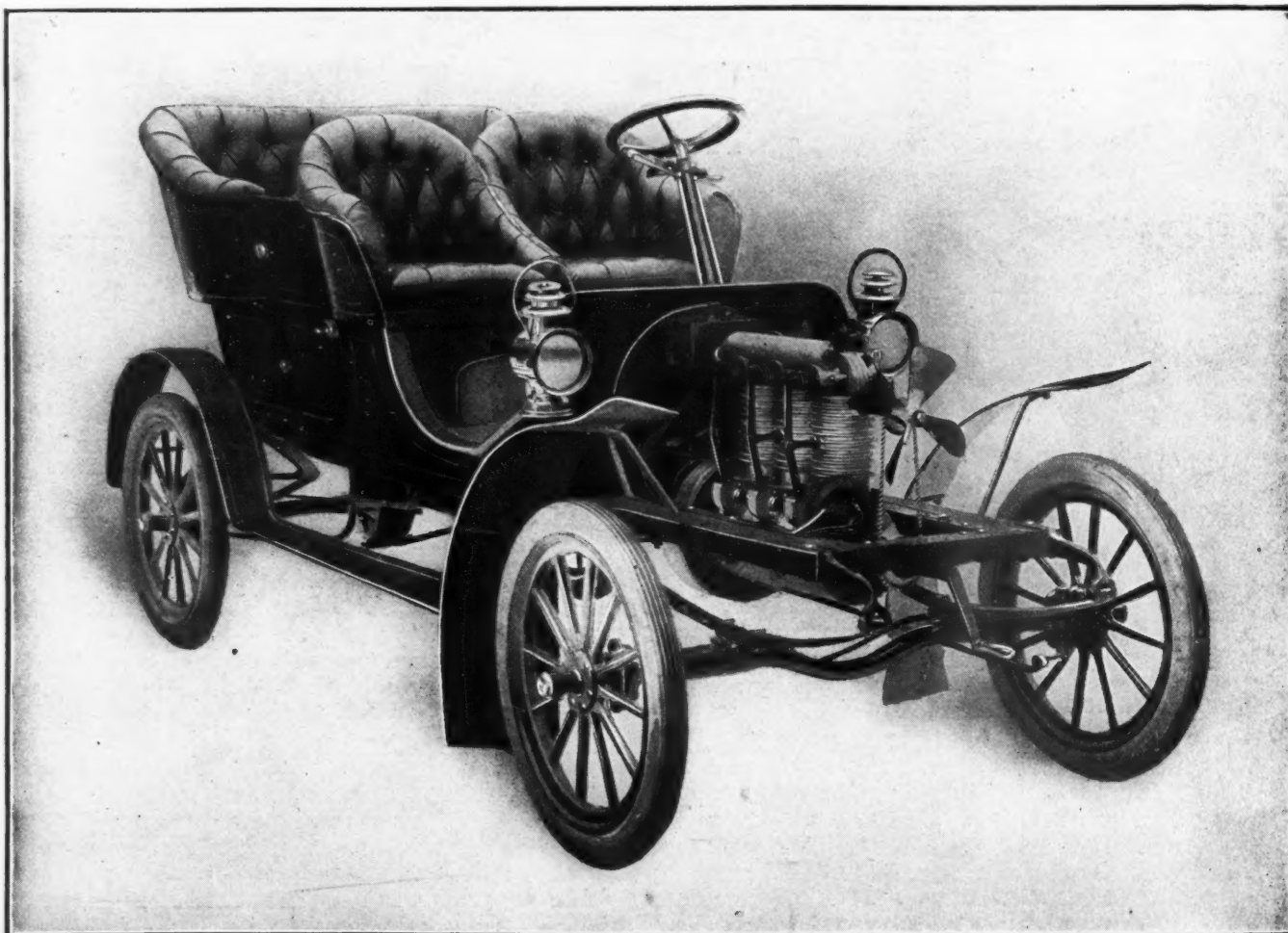
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**BUILT FOR SERVICE
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**IT SERVES YOU
THE CAR OF ECONOMY**



Model H— 8-10 H. P. Runabout	\$ 650
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**HONEST CARS
HONEST PRICES**

Excessive Horsepower

Efficient Very Speedy

Great Hill-Climber

Piece for Piece, Dollar for Dollar, the **CAMERON CAR** is unquestionably the best proposition of the year. All models are **AIR-COOLED, SHAFT DRIVE, SLIDING GEAR TRANSMISSION, DIRECT DRIVE ON HIGH SPEED, NO GEARS IN MESH.**

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THE JAMES BROWN MACHINE CO.

ESTABLISHED
1829

Pawtucket, R. I.

J. HAROLD JOHNSON, Sales Manager

"If I can do you any good at any time, by speaking to any one who doubts the qualities of the Locomobile, I shall be very pleased."
J. P. T., M.D., N. Y. City.

"I am very much pleased with the behavior of the Locomobile, and consider it way ahead of last year's car, although that gave good satisfaction."
F. W. B., Bridgeport.

"In every way the Locomobile has been entirely satisfactory; never has failed to do what was required of it. Refer any to me you care to."
A. G. M., Norwich, Conn.

"I wish to say the Locomobile fulfills my expectations in every respect; it runs magnificently, does its work easily, quietly and without vibration."
A. S. P., Wichita, Kan.

"I can offer no suggestions which would be of value as to the improvement of the Locomobile. It has far surpassed my expectations."
W. B., Boston, Mass.

"Cannot say too much in praise of the Locomobile. Have several friends who own cars, and they say it is equal to if not better than the foreign cars."
C. L. H., Norwich, Conn.

"This is the fifth automobile that I have had, but of all the cars I have seen or used there is none that will compare with the Locomobile in any manner."
S. T. M., Lafayette, Ind.

"I have run my Locomobile 4,000 miles and have never had occasion to leave my seat for any disarrangement or breakdown of machinery."
J. B. C., Bridgeport, Conn.

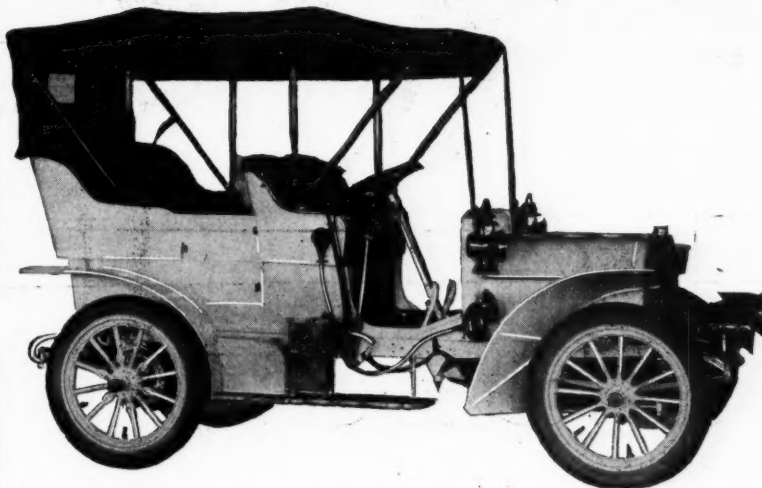
"Mr. G. P. B— of Chicago, who owned one of our Type 'D' cars, and has just placed his order for one of our 30-35 H. P. cars, advised the writer that we do not claim enough for our cars." B. G. Sykes, Chicago Locomobile Supt.

The Locomobile

"The Locomobile is simple, efficient and satisfactory in every respect. I have used it over the worst kind of roads and under the most trying conditions, and have found it efficient in every respect."
C. E. B., New York City.

GASOLENE TOURING CAR

"The Locomobile has run between 6,000 and 7,000 miles. We have just examined the gear case and find that the gears are in perfect condition and that there has not been the slightest wear in any of the bearings."
C. C. W., Cortland, N. Y.



"My experience last season was so satisfactory that I feel owners of Locomobiles would be doing intending purchasers an injustice by not letting them know what a good car they can get by buying a 'Loco.'"
F. W. S., Mexico City.

"I have yet to see a car which I think is better than my Locomobile, or will stand up as well over all kinds of country roads with the ordinary usage which a car gets."
P. W. W., Boston, Mass.

"It gives me great pleasure to say a good word for the Locomobile Gasolene Touring Car—I regard it as the most reliable and generally satisfactory of any of the twelve automobiles I have owned."
G. F. C., New York, N. Y.

"Where my Locomobile was this summer for a month it was the only car out of two dozen, including high priced foreign cars, that was always in good shape and running every day."
C. W. L., New York City.

"The Locomobile is delightful in every respect, and there has been no trouble whatsoever so far."
H. S. E., New York.

"The Locomobile has now run about 10,000 miles, and is in as good condition as ever."
A. A. M., San Francisco, Cal.

"Easily the Best Built Car in America"

Write for full information regarding our 1905 product. All models are of the four-cylinder type with side entrance tonneaus

PRICES, \$2,800 to \$8,000

THE Locomobile COMPANY OF AMERICA

BRIDGEPORT, CONNECTICUT

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NEW YORK—Broadway, cor. of 76th Street
CHICAGO—No. 1354 Michigan Avenue
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"I fail to see how you could improve in any way upon the Locomobile, as its details seem perfect, and it is without doubt 'easily the best built car in America.'"
A. L. P., Providence, R. I.

"My Locomobile has made since the 22nd of January, 1903, 13,950 miles."
R. L. M., New York, March 31.

"Of our three large machines we much prefer the Locomobile for all round work and its satisfactory results."
C. F. L., Prest., Boston, Mass.

"I know of several owners of other cars who do not always return on schedule time, but have yet to hear of a dissatisfied owner of a gasolene Locomobile."
W. P. A., Ridley Park, Pa.

"I have now operated the Locomobile for about five months. During that time I have never wanted the car when it was not ready to go out."
W. A. W., Jr., Hoosic Falls, N. Y.

"I have used it now three months in my business, which is constant. We are averaging 60 miles per day, up hill and down. The Locomobile is certainly all you have recommended."
Dr. R. W. L., Ridgefield, Conn.

"Every time I drive the Locomobile I am more than pleased with it. Saturday evening last I drove 20 miles in 42 minutes, including three long hills, and the car ran like a watch."
F. W. M., Jr., La Salle, Ill.

"My Locomobile delivered to me in November, 1902, is running satisfactorily, and with the exception of such adjustments as are necessary on all cars is always in commission."
M. M. R., New York City.

"From my experience, I would certainly recommend a Locomobile to any one considering the purchase of a touring car."
J. H. M., New Haven, Conn.

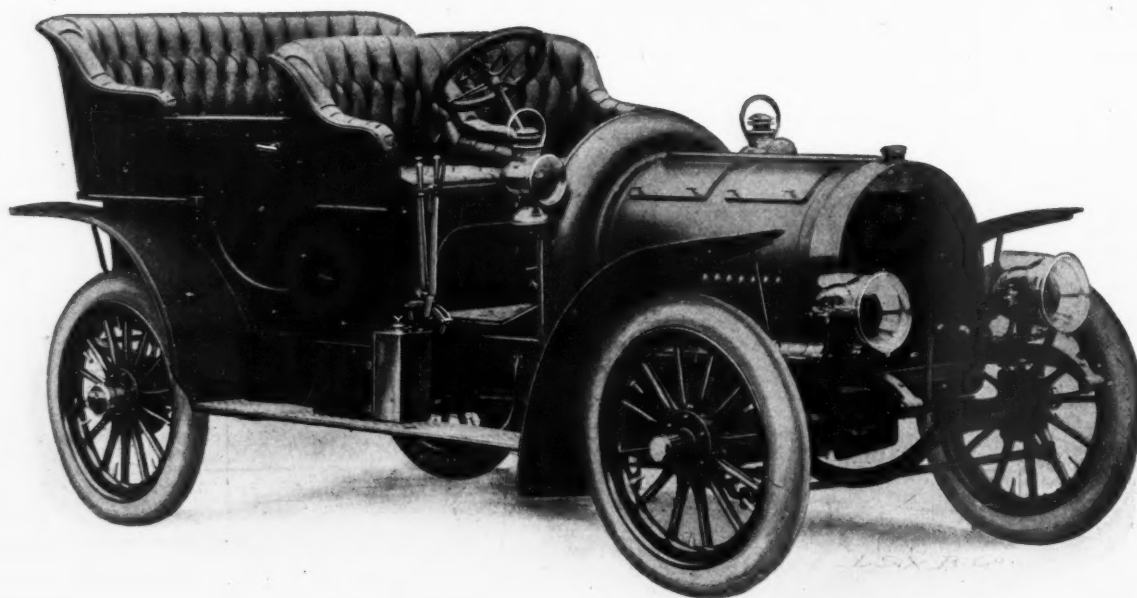
"I have now run my Locomobile for about 6,000 miles, and it has never refused to come home under its own power."
F. W., Fitchburg, Mass.

"I must say the Locomobile has given me entire satisfaction in every way; the more I drive it the more I think of it."
C. L., New York.

"I have run my four-cylinder Locomobile over 5,000 miles, without any bother, doing the driving myself."
W. B. S., Overbrook Farms, Pa.

The Royal Tourist

"TRUE BLUE"


32-38 H. P.
GUARANTEED
2500 Lbs.

\$3,000.00

There is no Better Car at Any Price

Any desired speed. Different style bodies. Positive automatic lubrication of motor and speed gears. Perfect control and throttle---without mechanical governor. Detachable clutch which requires no adjustment. Absolutely reliable shaft drive and transmission. Free driving axle---load all carried on axle casing. Advanced design in body, dash and hood. 4 1-2 in. tires front and rear, complete lamp equipment. Adequate luggage compartments under front and rear seats.

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Or write Dept. 2 for Full Particulars

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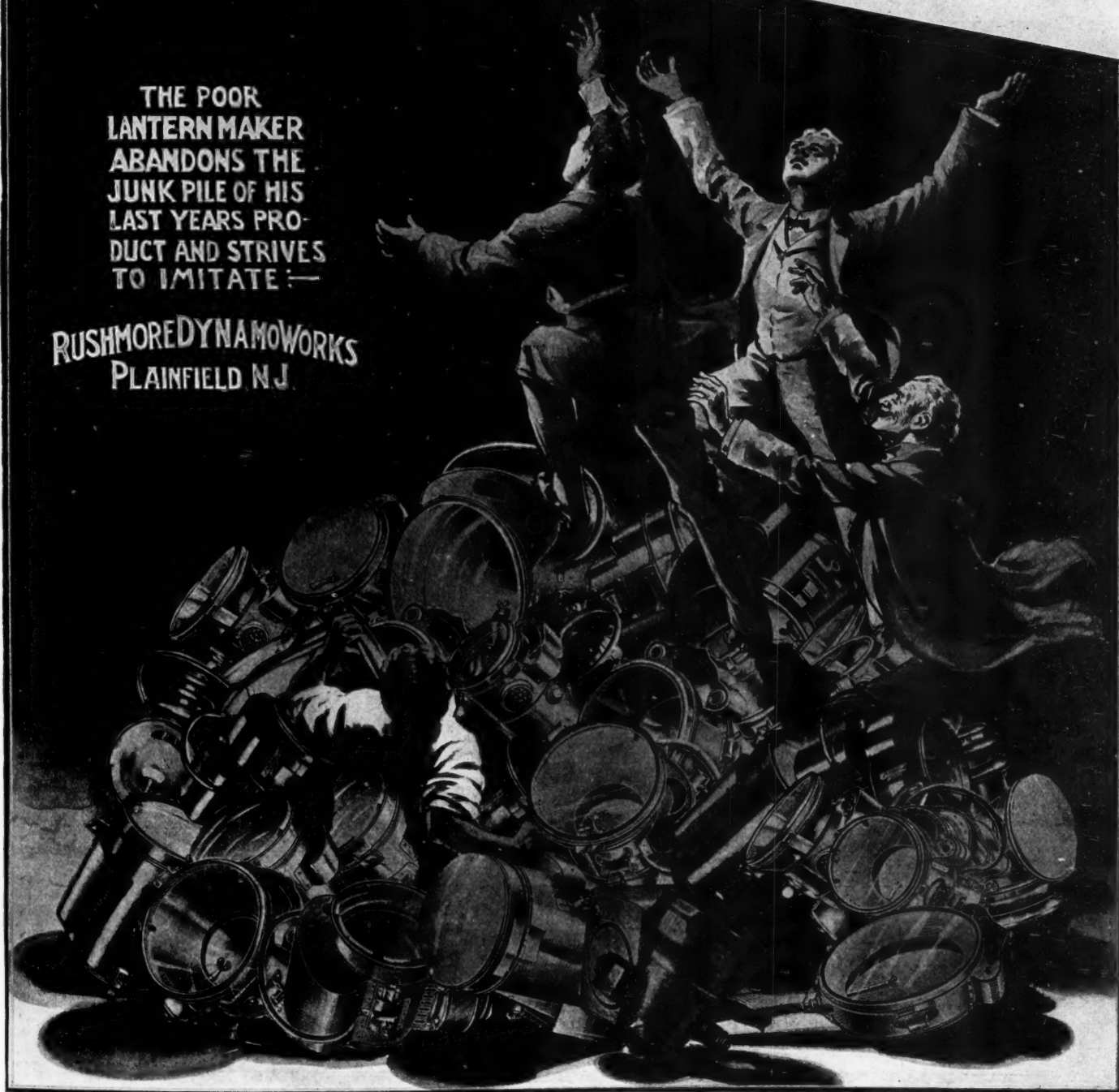
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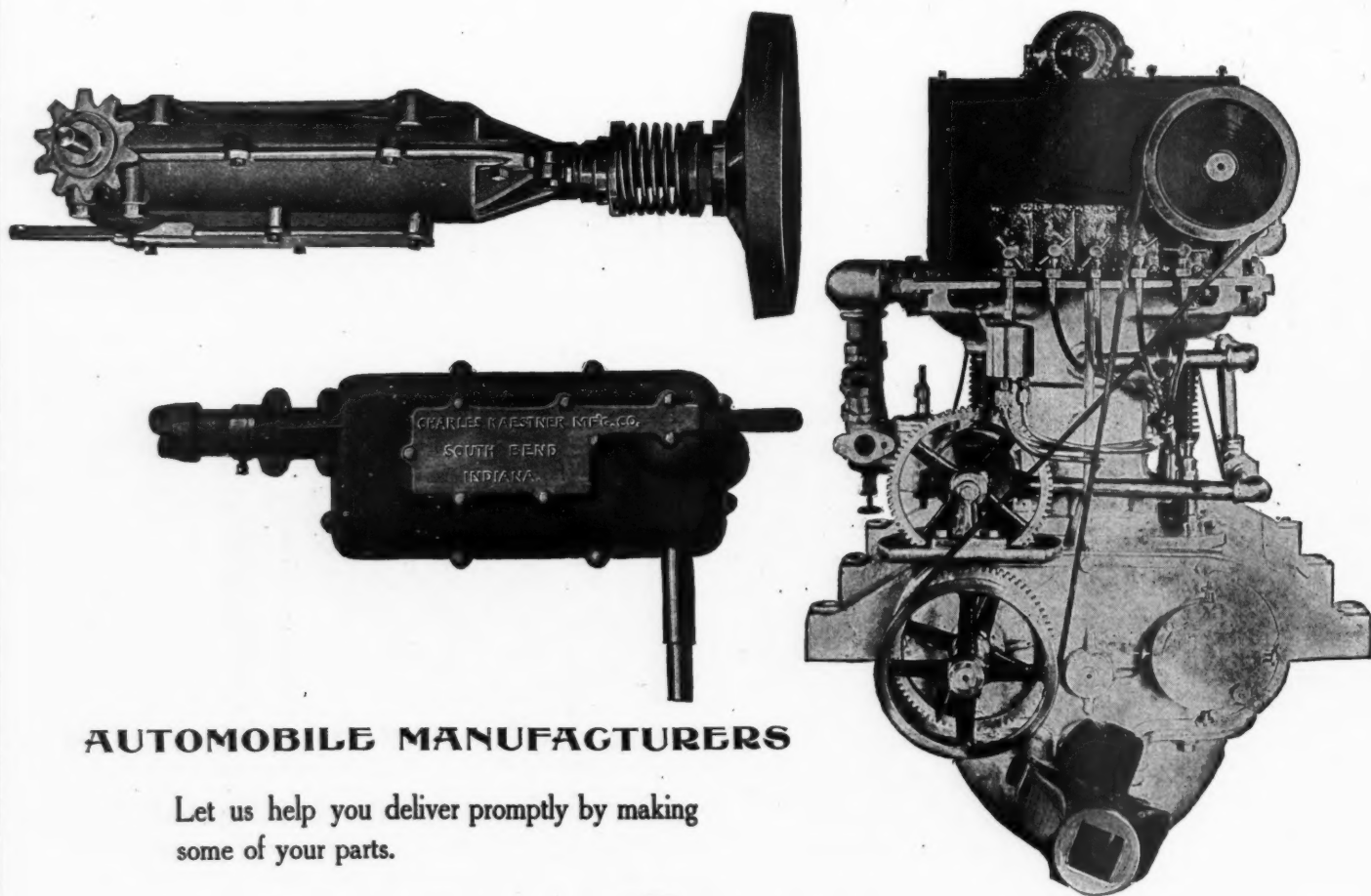
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THE POOR
LANTERN MAKER
ABANDONS THE
JUNK PILE OF HIS
LAST YEARS PRO-
DUCT AND STRIVES
TO IMITATE:—

RUSHMORE DYNAMO WORKS
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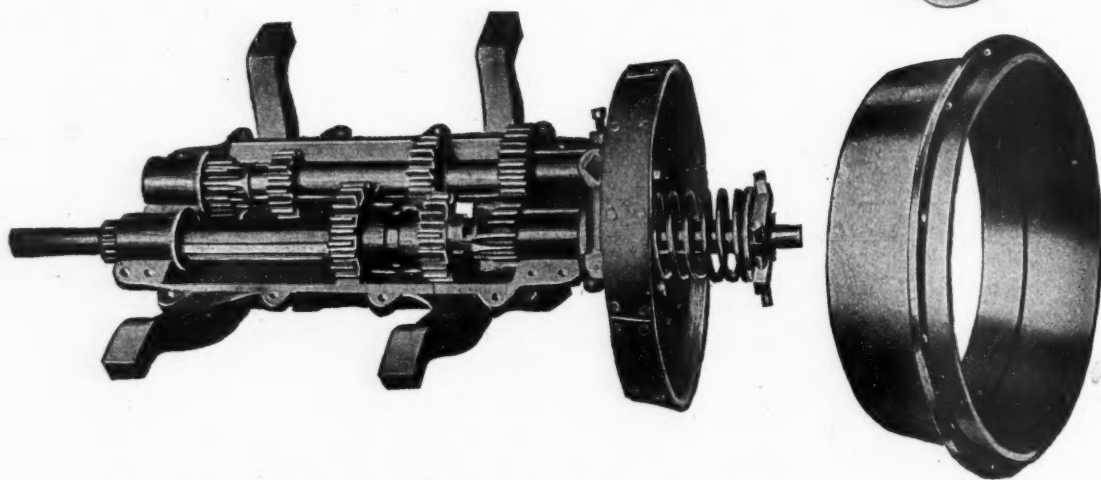


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AUTOMOBILE MANUFACTURERS

Let us help you deliver promptly by making some of your parts.



If You Want the Best Buy Kaestner Goods

WE NOW MAKE 18 different styles of Transmissions. Motors from 10 to 125 H. P. for Automobiles, Boats and Mining Machinery. Side Lever Controls, Wheel Steering Devices. Can deliver to specified contracts.

SEE US AT THE CHICAGO SHOW, GALLERY ANNEX SPACE 292

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POPE

"The Name Bespeaks the Quality"

Gasoline and Electric Cars
For Every Day and Every Use

POPE-WAVERLEY ELECTRICS
 15 Distinct Models \$850 to \$2250

POPE-TOLEDO GASOLINE TOURING CARS
 20 to 90 H. P. Side Entrances \$2800 to \$10,000
 24 - 30 H. P. Front Entrance (Prompt Delivery) \$3200
 EACH MODEL A COMBINATION OF MECHANICAL PERFECTION AND LUXURIOUS COMFORT

POPE-HARTFORD AND POPE-TRIBUNE GASOLINE CARS
 6 to 16 H. P. Thoroughly up to date \$500 to \$1600

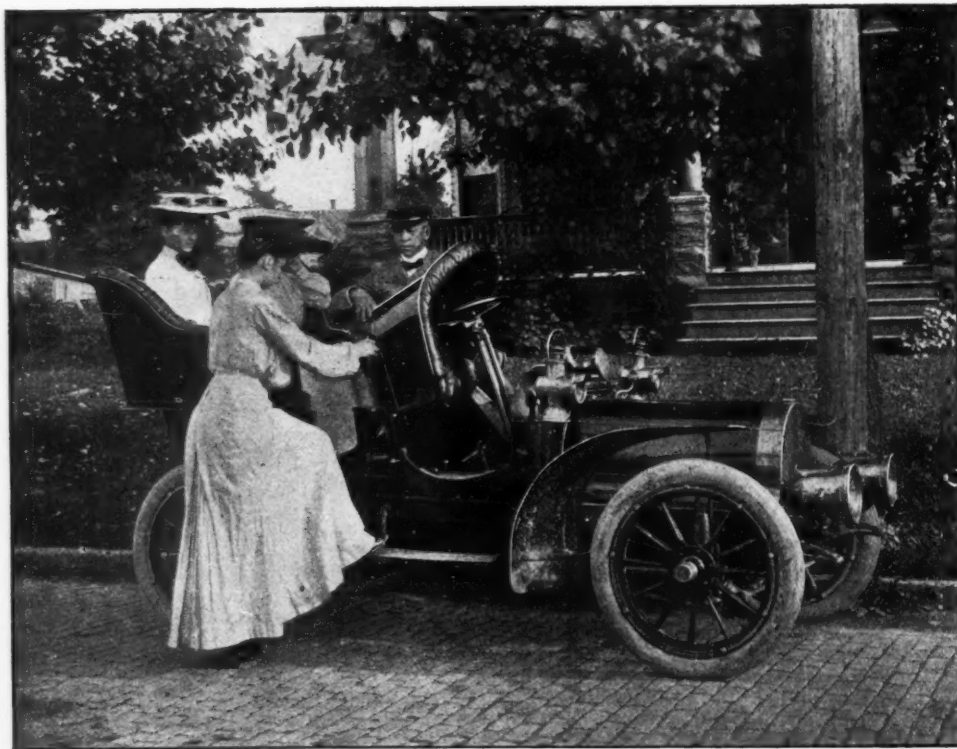
BE SURE TO SEE OUR EXHIBIT AT
The Automobile Show

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POPE MANUFACTURING CO.
 HARTFORD, CONN.

Members Association Licensed Automobile Manufacturers.

AUTOMOBILES



**“Half
of
Thirty-
Five”**

The Beautiful “DUQUESNE” Car

How delighted

some manufacturers are at having discovered (after many years and at the expense of their customers) how to properly lubricate a motor! How to ignite the charge positively! That a side entrance tonneau is better than the “hearse” type! Somehow the “discoveries” made by the different designers don’t “jibe” though. Some say “splash,” others advocate “sight feed,” others “positive feed” by ratchet pump, rollers, etc., etc.

For over two years

the “DUQUESNE” (four-cylinder, vertical, air-cooled) motor has been lubricated by *force sight feed, aided* by the splash system. You can’t get too much oil to working parts.

For two years past

“DUQUESNE” ignition has been by single coil for four cylinders with our own simple timing device *on the dash*. And the “DUQUESNE” was the first side entrance tonneau car exhibited at any American show.

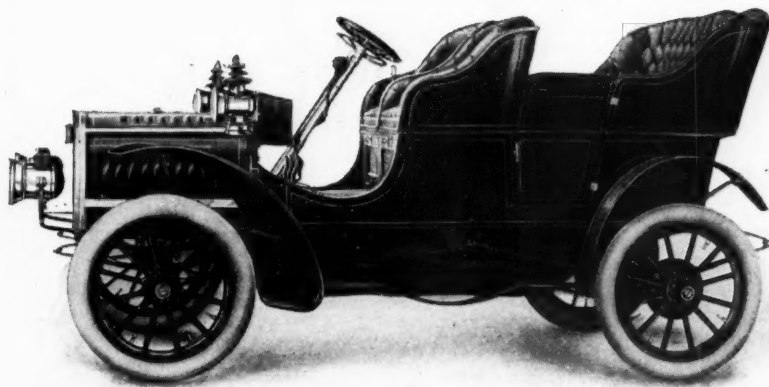
Two years ago

we threw away the starting crank; she starts from the seat *every time*. These are only a few of our progressive features—there are others that will keep ‘em all guessing.

Why be a fogy — you can be up-to-date
for “HALF OF THIRTY-FIVE”

AMERICAN DUQUESNE COMPANY
Sole Distributing Agents JAMESTOWN, N. Y.

Rambler



SURREY TYPE ONE 18 h. p. \$1350

THE New York Automobile Show has demonstrated that no other vehicle of the same price has the beauty, the power and the reliability of this model. Dealers and users from all over the country have shown the greatest enthusiasm over it.

They are the most loyal who know the RAMBLER best; and it has been gratifying to know that after their first season with our automobiles, users do not discard them for higher priced makes, even though their tastes along other lines are extravagant and would only be gratified by the purchase of higher priced vehicles, were it not for the remarkable simplicity of our models, and the consequent ability to dispense with the service of a chauffeur, and to enjoy the pleasure of being able to run and care for the machine without such help.

Other models, \$750, \$850, \$1500, \$2000, \$3000.

THOS. B. JEFFERY & CO., Main Office and Factory, Kenosha, Wisconsin

BRANCHES

BOSTON, 145 Columbus Avenue

CHICAGO, 302-304 Wabash Avenue

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Representatives in all other leading cities.

WIN



FIVE MODELS--All with four cylinder vertical motors. Model C, (shown) sine, 24-30 h. p., \$3,500. Model A, 40-50 h. p., \$

Polar Compound. Keeps water fluid at 10 degrees below zero. One filling lasts all winter. Twenty-five cents a gallon, f. o. b. Cleveland. Shipping Cans extra—5 gal. 50c, 10 gal. 75c.

THE WINTON MOTOR
MEMBER ASSOCIATION LICENSED
CLEVELAND

WINTON

Automobile power is often tremendously wasted, because inefficiently applied.

Take the chain drive. Dirt simply cannot be excluded, because a chain cannot be successfully encased. Hence, dirt grinds down the sprocket teeth and the face of chain blocks or rollers, creating Backlash. Then, instead of a constant pull, the engine encounters a series of jerks. This means Waste of power and Injury to engine, chain and sprockets.

Chains stretch under driving strains. Once stretched, they climb the sprocket, bind, and break. Nine-tenths of the chain breaks in motoring are due primarily to stretching.

Take the belt drive. Moisture lengthens belts and causes slipping and jumping the pulley. Where a fan is run by belt, the motorist has no assurance that the belt will not jump the pulley, unknown to him, and cause the engine to become injuriously overheated.

There is NO chain or belt Anywhere on the 1905 WINTON. Power is applied throughout by Gear, both to propel the car and to operate fan, magneto, oiler, etc.

Efficiency means to avoid waste of power. Where encased gears are run in oil—as on the 1905 WINTON—the highest degree of efficiency is secured; for the power developed is so applied that the possibility of wasted energy is eliminated. Hence, WINTON ECONOMY.

herewith) 16-20 h. p., \$1,800. Model B, 24-30 h. p., \$2,500. Model B, Limousine, \$3,500. Model A, Limousine, 40-50 h. p., \$4,500.

MOTOR CARRIAGE CO.
 BASED AUTOMOBILE MANUFACTURERS
 OHIO, U. S. A.

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See our Exhibit AT THE Chicago Show

A HEART TO HEART TALK

WITH THE LIVE DEALER

WHO IS WILLING TO BE CONVINCED

Reasons why you should secure the Queen agency:

1st. Because we have the most complete line of cars ever offered by any manufacturer—seven (7) different models.

2d. Excellent workmanship throughout, high finish, swell upholstery, powerful motor and popular price

makes them natural sellers.

3d. A well pleased customer this year means increased sales in the future; live agents appreciate these facts and are securing territory.

WITH THE PROSPECTIVE BUYER

WHO WANTS ALL THAT HIS MONEY WILL BUY

A few reasons why you should buy a Queen:

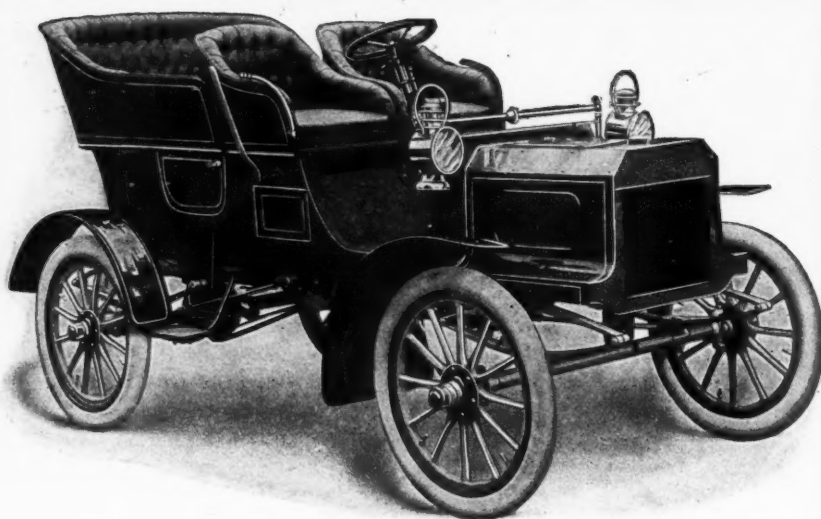
1st. Because they have no equal on the market for the price and quality.

2d. They are finely finished throughout, built of the best material, ensuring long life and easy running, simple in construction with ample power for all conditions.

3d. All parts interchangeable insuring you against vexatious delays.

4th. We are granting agencies only to thoroughly responsible parties who will be courteous and attentive to customers.

MODEL "E"

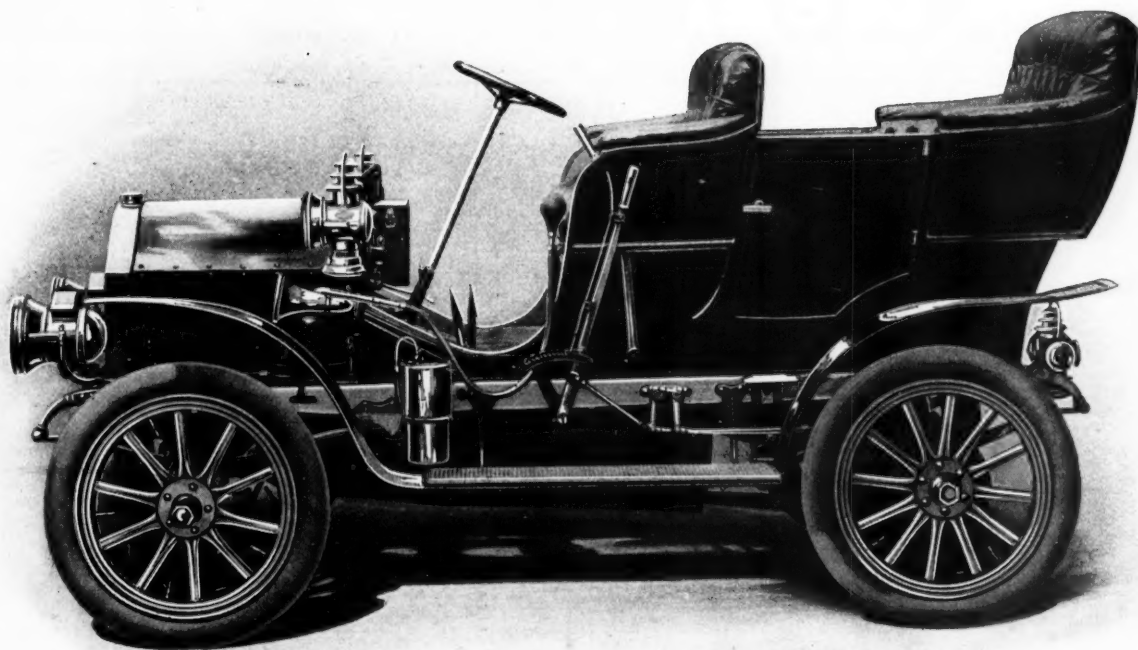


QUEEN

C. H. BLOMSTROM MOTOR COMPANY
DETROIT, MICHIGAN

Columbia

Mark
XLIV
18 Horse-Power



LIGHT TOURING CAR

PRICE, \$1,750

Double opposed horizontal engine under forward bonnet. Cylinder automatically lubricated. Single lever speed change. Sliding gears in oil bath. Direct transmission. Standard spark plugs. Foot operated clutch, throttle and brake. Hand emergency brake. Pressed steel frame. Long wheel base. Easy springs. Luxurious side entrance body with individual front seats and full width cross seat at rear. A powerful, fast, enduring car, equal in capacity and performance to many four-cylinder cars and has only half their complications.

Winner of Three Events at Ormond, Fla., Jan. 24, 1905

Catalogue of Columbia 18 h. p. and 35-40 h. p. Gasoline Cars will be sent on request; also separate catalogues of Columbia Electric Carriages and Columbia Electric Commercial Vehicles.

ELECTRIC VEHICLE CO.
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NEW YORK
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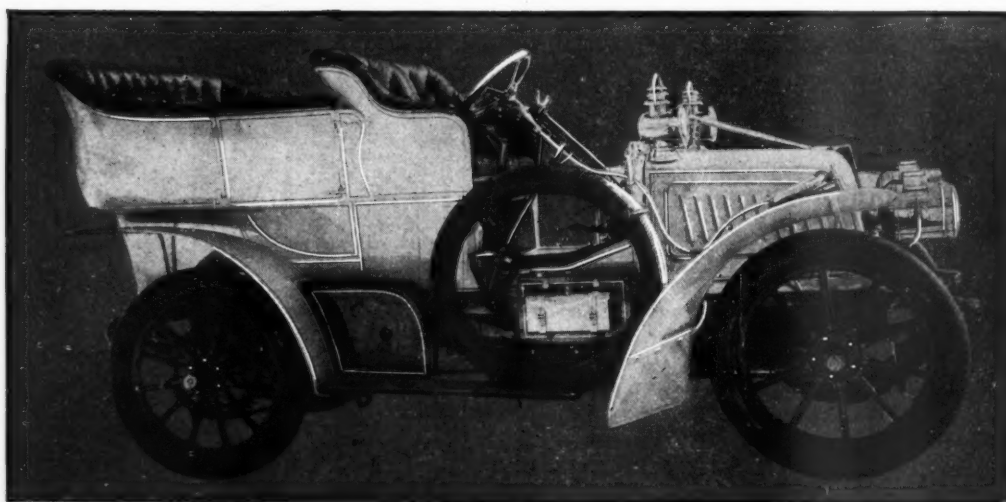
BOSTON
74 Stanhope Street

CHICAGO
1413 Michigan Avenue

Member Association Licensed Automobile Manufacturers

WORTHINGTON AUTOMOBILE ...COMPANY...

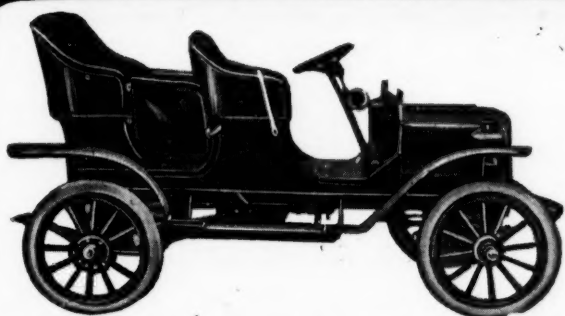
547 Fifth Avenue
New York City



 **24 H. P. Berg Touring Car**

IMMEDIATE DELIVERY

MEMBERS A. L. A. M.



Price,
\$1,250

REO TOURING CAR

16 h. p., 1,500 lbs., seating five passengers, detachable side door tonneau, 35 miles per hour. Invented and built by R. E. Olds, inventor of the first practical gasoline runabout; and the foremost designer and builder of gasoline motor cars in the United.

REO

**The REO car
is thoroughly right**

Designed on right principles by a man who has studied those principles in every kind of motor engineering for a life-time.

Correctly applied as he has applied them for twenty years with conspicuous success.

Of enduring and practical construction which extends to the smallest details and manifests itself brilliantly in the continuous speed and efficiency of actual use.

Luxurious in finish and appointments. In keeping with the most exacting demands of the present season.

Economical beyond any car of the day both in first cost and maintenance. Economical because correctly designed, simple and strong. Economical because built by a man sure of his car and his market, who built on a large scale and built right from the first.

Design, mechanics, construction, finish, price:—All thoroughly right.

REO Runabout

8h. p. 850 lbs. Price \$650 25 miles an hour

The REO Motor Car Co.

R. M. OWEN, Sales Manager

Sales Office, 138 W. 38th St., New York. Factory, Lansing, Mich.

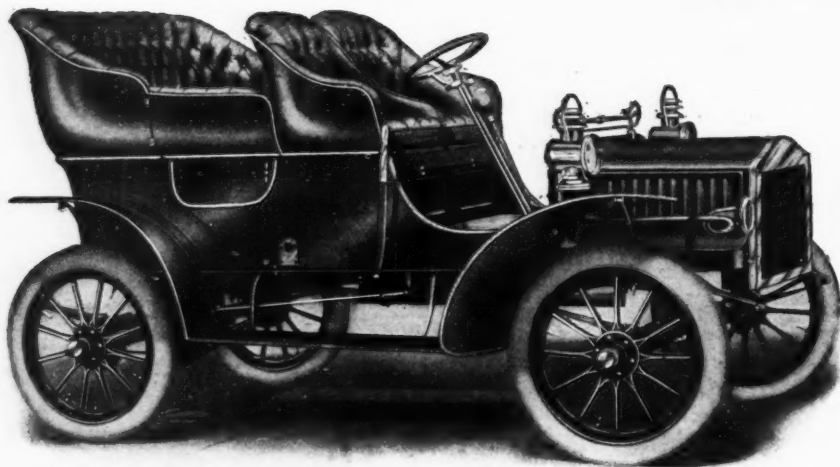
Agencies throughout the United States

THE MICHIGAN

Two Models—"E" and "D"

LIGHT TOURING CARS

FOR 1905



APPROPRIATELY
NAMED "THE
CAR OF POWER."

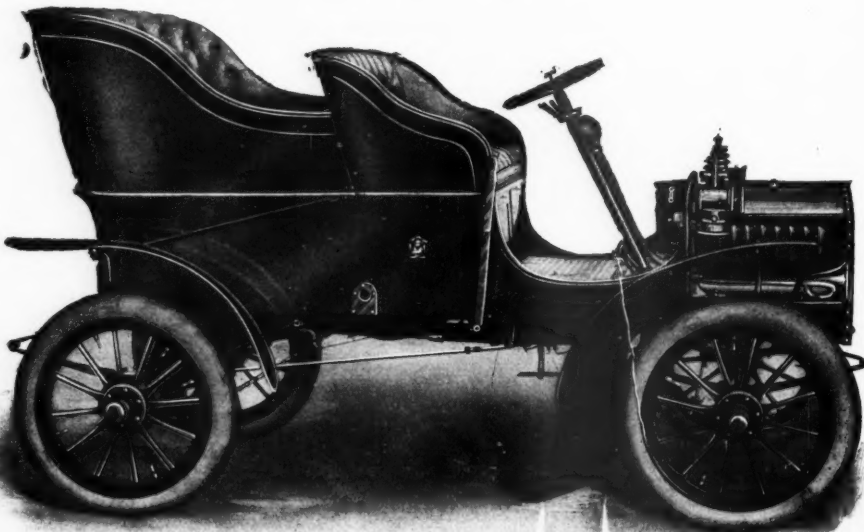
Model E, 1905 Michigan—Price \$1,250
Wheel Base 86 inches

This superb new creation for the coming season must be seen to be appreciated. It first appeals to the purchaser by its beauty, then it satisfies him by its **SPEED, STRENGTH and DURABILITY.**

These magnificent cars are equipped with our tried and tested 1904 Motors, 4½x5 inches, 14 brake test horse power, two cylinder horizontal opposed, planetary transmission, with two speeds forward and reverse; 1¼ inch chain, Warner differential, Hill Precision oiler, Kingston or Schebler carbureter, expanding rear hub brakes and brake on differential, full elliptic springs of best quality. French hood. Wheels 30 in., Diamond or other standard tire, 3½ in. Construction throughout first class.

☛ This car is unsurpassed in speed, power, appearance, easy riding, flexibility and general utility by anything at same price.

We invite correspondence.



Model D, 1905 Michigan—Price \$1,100
Wheel Base 80 inches

*Both Models on exhibit at the Chicago Automobile Show, Feb. 4-11—In the Annex
Call and examine them in detail*

Michigan Automobile Co., [Ltd.] Makers

KALAMAZOO, MICHIGAN

THE SOMMER

"A DETROIT-MADE CAR" WHICH MEANS MUCH TO THE PROSPECTIVE BUYER

Just scan these tip-top talking points

MOTOR—4 cycle, double cylinder opposed $4\frac{1}{2} \times 5$ in., develops 15 h. p. at 900 revolutions, valves mechanically operated. There are no packing joints and no joints of any kind communicating with the water space. Each cylinder head is cast in one piece. Spark is shifted automatically by the speed of the engine; the spark can never be advanced when the engine is not running. The entire motor is lubricated by an automatic oiler through the inside of the crank case.

TRANSMISSION—Planetary type, two speeds, forward and reverse. Gears steel blank, case hardened, bushed with phosphor bronze, running in an oil tight case. High speed clutch, triple disc type, two of iron, one of fibre, tightened direct to sprocket, eliminates unnecessary strain on gears and the possibility of stripping while running on the high speed.

STEERING—Wheel, with Brown-Lipe steering gear. No back lash.

BRAKE—Raymond, double band on differential in rear axle. Brake control is operated by foot lever and is very quick and positive. Car always under instant control.

AXLES—Rear $2\frac{1}{2}$ in. tubing, $1\frac{1}{2}$ in. shaft; front $1\frac{1}{2}$ in. tubing. Timken roller bearing throughout.

FRAME—Pressed steel.

SPRINGS—Half elliptic, the front are five leaf $1\frac{1}{2} \times 38$ in., rear are six leaf $1\frac{1}{2} \times 40$ in., made of the best tempered steel.

CHAIN—Chain drive, direct from engine shaft to rear axle. Whitney roller, detachable link, $\frac{5}{8}$ in. wide, $1\frac{1}{2}$ in. pitch.

COOLING—Radiator contains 28 tubes 24 inches long. The water is circulated by gear pump, geared to motor pump.

IGNITION—Jump spark, best makes of spark coils and ignition plugs, tested out thoroughly.

CARBURETER—Float Feed.

MUFFLER—Very silent and provided with cut-out.

GASOLINE CAPACITY—Nine gallons.

WATER CAPACITY—Six gallons.

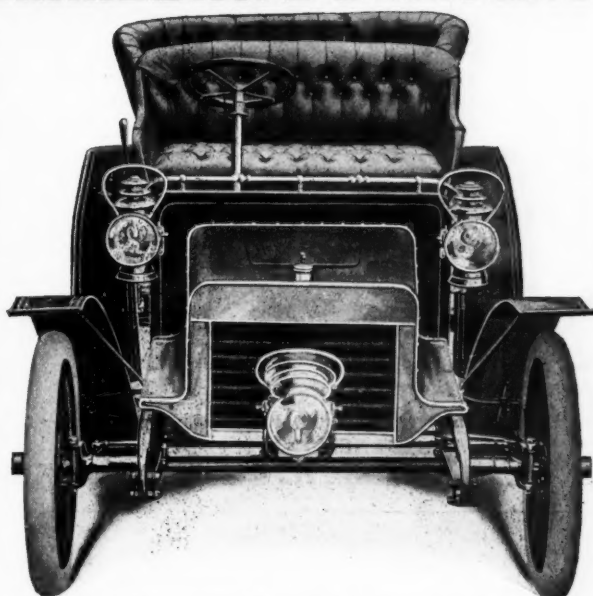
DEALERS

Catering to all tastes will carry in stock both

REAR AND
SIDE
ENTRANCE
TYPE
OF CARS

During 1905

IMMEDIATE DELIVERY



THE SOMMER 1905 Model E, Five Passenger TOURING CAR

TONNEAU—DETACHABLE: Plenty of room, built for 3 persons, not $2\frac{1}{2}$
WEIGHT . . . 1700 lbs. complete | **WHEEL BASE** . . . 82 inches
SPEED . . . 5 to 35 miles an hour | **TREAD** . . . 56 inches

1905 MODEL "E"

EQUIPMENT

Same as a
\$3,000 Car

TIRES...

Diamond or G & J Detachable,
30x3½ inches, extra heavy.

WHEELS...

Artillery pattern, wood, 30x3½
inches, fitted with Timken
roller bearings.

TONNEAU...

Detachable...Large and Roomy
..Seats Three Full Grown Per-
sons Comfortably.

FINISH...

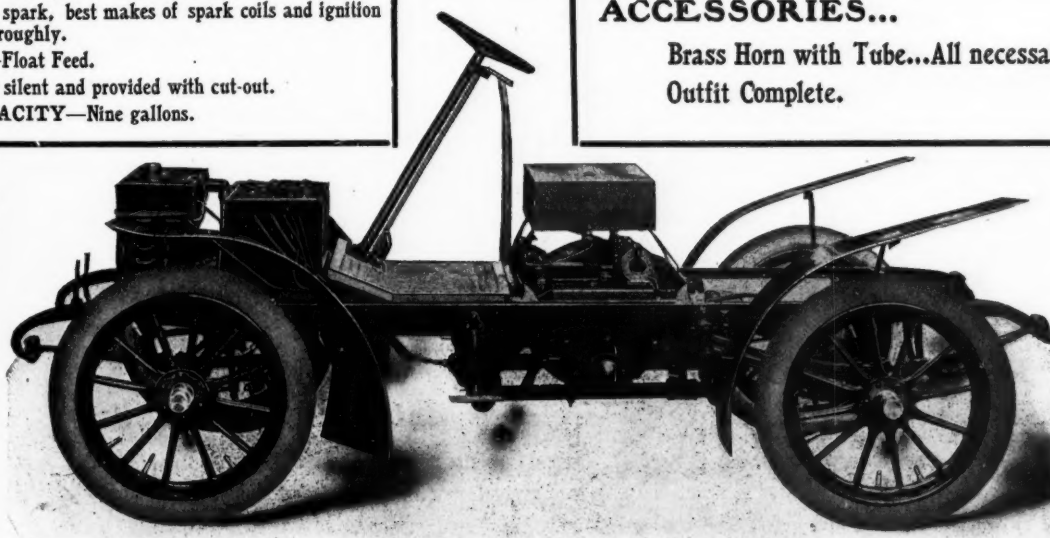
Body and Frame, Dark Green
or Olive, Gear in Yellow...
Brass Rail on Dash.

LAMPS...

Two Solar Side Lamps..
Solar Tonneau Lamp..
Phare Solar Headlight.

ACCESSORIES...

Brass Horn with Tube...All necessary Tools...Repair
Outfit Complete.



...Not for...

TWENTY
YEARS TO
COME

Will any car
be built to
equal this
one at the
price.

PRICE, \$1,000

With a Discount big enough to make any
Dealer's hair stand straight on end

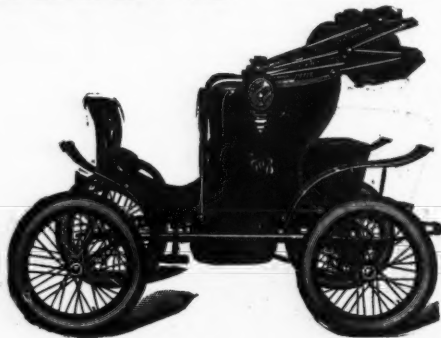
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RIGHT
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SOMMER MOTOR CO.

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DETROIT,
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CLASSIFICATION ... WHY? DISTINCTIVE

THE LIGHTEST
THE STRONGEST
MOST DURABLE
MOST EFFICIENT
BEST FINISHED



ABSOLUTELY SAFE
PERFECTLY CLEAN
BEST TO RIDE
MOST ECONOMICAL
TO KEEP

THE BAKER ELECTRIC

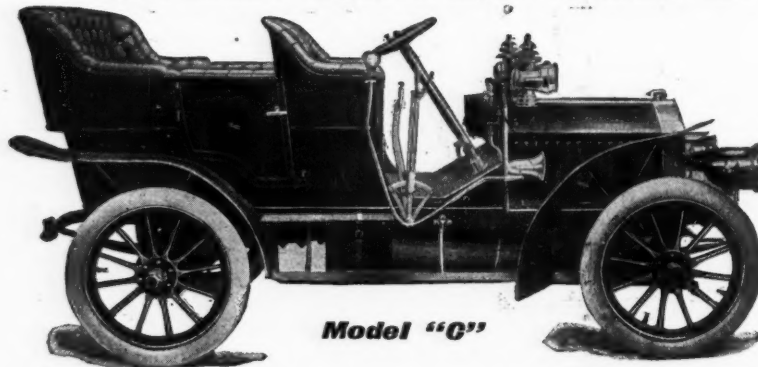
Attractive in Rich Finish and Design. ✿ Simply Manipulated. ✿ Always Satisfactory.
A Carriage Any Lady Can Drive.

SEND FOR OUR B K CATALOG.

THE BAKER MOTOR VEHICLE CO., Cleveland, Ohio

THE "CLEVELAND"

A High-Grade, Light-Weight Touring Car



Model "C"

18-h. p. Four Cylinder Vertical Engine. Price \$2,800

FEATURES:—91-inch wheel base; pressed steel frame; aluminum underbonnet; spark and throttle control on top of steering wheel; three speed transmission with direct drive on high speed; mechanically actuated inlet and exhaust valves; jump spark ignition; side door entrance.

We are establishing agencies. Write for particulars.

CLEVELAND MOTOR CAR CO., Cleveland, O.

Chicago Show—Spaces 111 and 112

You Can't Keep a Good Man Down

The New York Show proved that. With the poorest possible space, we made the best possible showing.



WHY?

Real-inbred-rooted-in-the-vein

MERIT—

that's why

28 H. P., 4 SPEEDS, COMPLETE, \$2,750

Acme Motor Car Company

READING, PA.

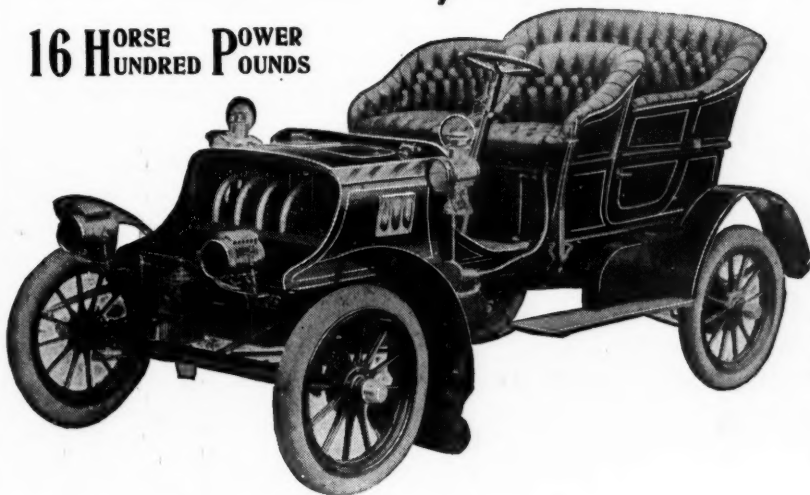
Boston Motor Co.,
43 Columbus Ave., Boston, Mass.,
Mass. Distributors.

Acme Motor Car Co. of New York,
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The Marion Car

16 HORSE POWER
HUNDRED POUNDS



BUILT TO RUN AND LAST FOR YEARS

Air-cooled 16 h. p. vertical motor
4 cylinders, 4 inch stroke, 4 inch bore
Side entrance detachable tonneau
Double chain drive
High road clearance
Long wheel base (96 inch)
Full elliptic springs, guaranteeing ease
and comfort on the road
Simple control and powerful brakes
Complete equipment
Finish of the highest possible quality
Price, complete with tonneau, \$1,500

Marion Motor Car Co.
Indianapolis, Ind.

New York, corner 38th and Broadway
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Boston, 147 Columbus Avenue
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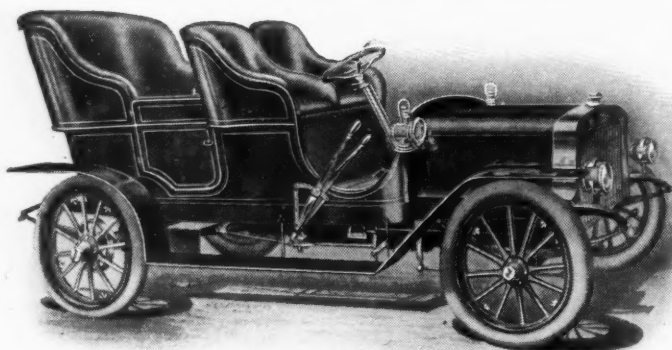


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Use a Bates, and Keep Your Dates

*We claim simplicity, durability, together with
a well driven, well designed, stylish car.....*



92 inch wheel base.
Side entrance tonneau.
Pressed steel frame.
Bevel drive direct connected on high speed.
Three speeds forward and one reverse.
Engine and transmission in one piece.
All working parts encased, including friction clutch.
Mud and slush cannot get in our working parts.

1905 Model B

Price, \$2,000

BATES AUTOMOBILE CO., Lansing, Michigan, U. S. A.



FIVE TON TRUCK.

Gasoline Freight Trucks

**Any capacity or speed to suit conditions.
If interested write for estimates.**

Construction heavy and substantial. Designed in accordance with best Engineering Practice. Factor of safety of five. Best experience of touring cars utilized. Engine—Four Cylinder Vertical, 6x6 in.; best on market.
Sliding gear transmission; three speeds ahead up to 10 miles per hour; one reverse. These trucks now in successful operation under commercial conditions.
We can demonstrate economy and reliability over any other method of handling heavy merchandise. Designs submitted for trucks of special service and observation cars.

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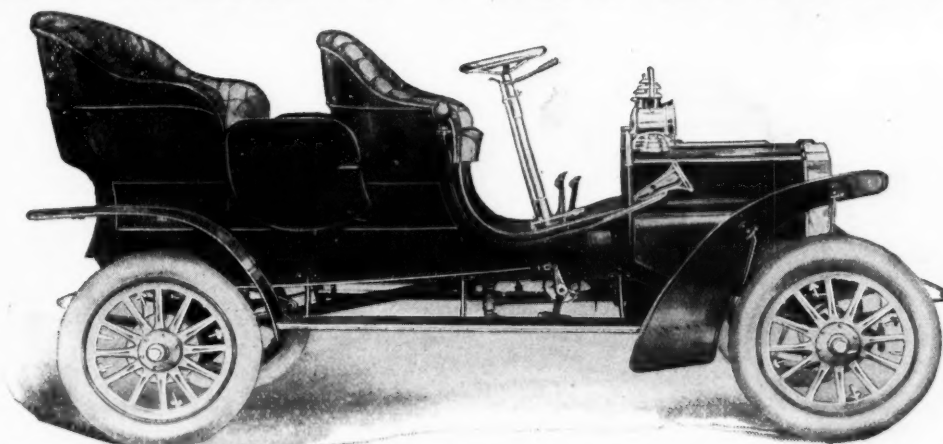
GENERAL OFFICE AND WORKS: **HARVEY, ILL.** (CHICAGO SUBURB).
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NORTHERN AUTOMOBILES

CHAINLESS

DUSTLESS

NOISELESS

Absolutely free
from Vibration"No Expense
but the
Gasoline"

1905 Touring Car, Side Entrance, opening on Direct Line to Running-Board. Price \$1,700.00

The refinement of simplicity. Number of parts reduced to the minimum. Easy to operate, easy to understand, and nothing to get out of order. Repair bills practically eliminated. The ideal car for American roads from every standpoint. Three point motor support prevents any possibility of machinery being thrown out of alignment. Roads which other automobiles cover at peril of machinery and passengers, present no difficulties to the **NORTHERN**. Every part is made in our own shops, and fits to perfection.

Planetary Transmission. 18-H. P. double opposed Motor. Power transmitted direct to beveled geared divided rear axle. Northern Automatic Compensating Carburetor "built to fit the engine" assures a perfect mixture at all speeds. In finish and upholstery the **NORTHERN** is superb. You may pay twice as much, but you cannot buy a better finished or more reliable Touring Car.

Northern Runabout 7-H. P. Better than ever. Has full back molded seat, larger oil cups, larger body and new carburetor. It is the ideal machine for the physician—the man of business—or for family use. Write for catalogue No. 14. Get in touch with "Northern Improvements." **PRICE \$650**

NORTHERN MANUFACTURING CO., Member A. L. A. M. DETROIT, U. S. A.

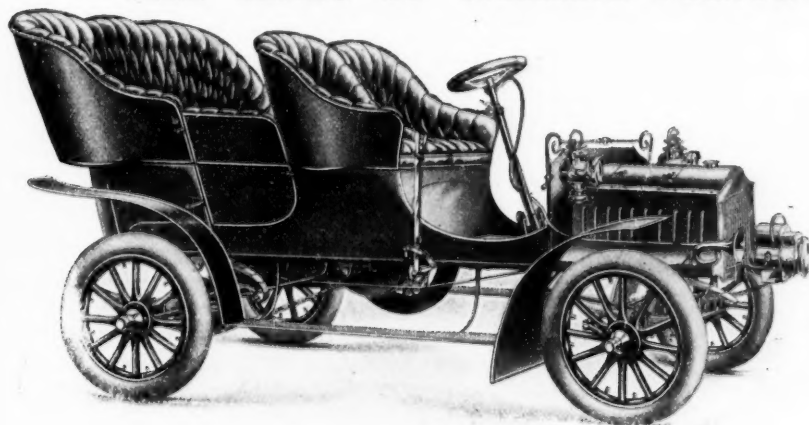
The Powerful DOLSON

The Strongest Car in
America at the Price

\$1500.

COMPLETELY EQUIPPED
AND READY FOR
EXTENDED TOURING

ALL KINDS OF TALKING POINTS AND REAL MERIT



The DOLSON is the strongest, most powerful car in America for its price. It is a hill climber of par excellence, has plenty of speed, easy of control, beautifully designed, handsomely finished and upholstered. Wheel base, 90 inches. Wheels, 30 inches. Tires, 3½ inches front, 4 inches rear. Large, roomy tonneau, seating five persons comfortably.

In design, material, workmanship and specifications, the **DOLSON** compares favorably with high priced cars, and it is listed at a price that enables agents to sell quickly and duplicate orders. We can and will make deliveries as specified.

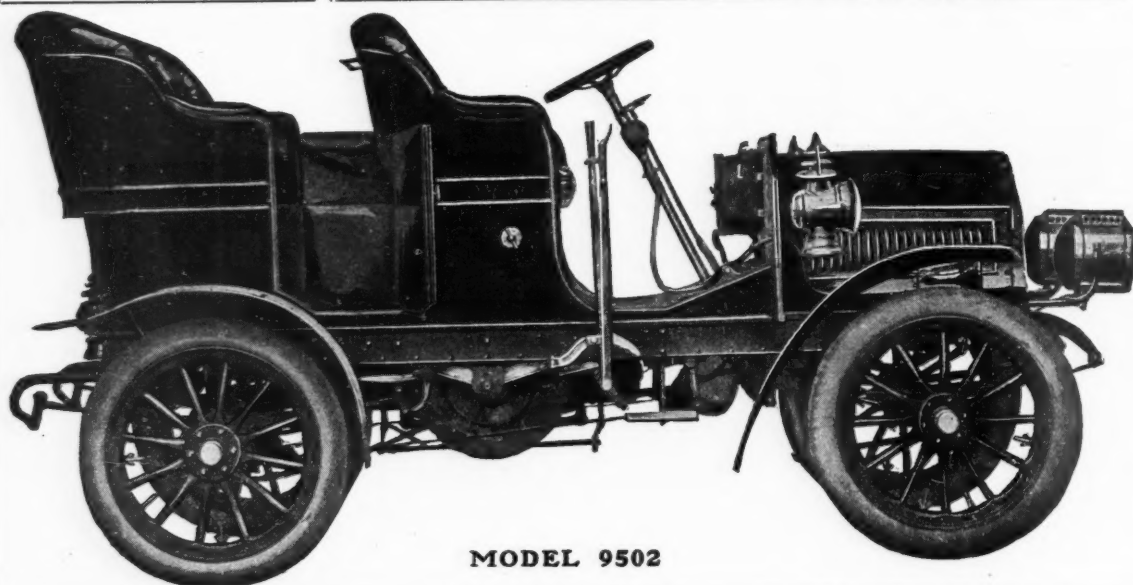
Don't wait too long. Get in line now.
Write for further particulars.

1905 MODEL C. Price, \$1500.00

Including two oil side lamps, acetylene head light, French horn, mats, full tool equipment, ready for extended touring.

JOHN L. DOLSON & SONS, : : Charlotte, Michigan

We will exhibit at the Chicago Show

1905**STUDEBAKER****"THE AUTOMOBILE WITH A REPUTATION BEHIND IT."****Gasoline****MODEL 9502**

**Side Entrance
Two Cylinder
Gasoline Car
Price, \$1350.**

**OR
With Rear Entrance,
\$1250.**

including Side Lights, Tail
Light and Horn.

The Studebaker Electric Victoria Phaeton is ready, and is without question the handsomest machine of its type ever constructed.

STYLE. This is best appreciated when it is compared with other cars.

SIZE. Capacious seats and ample leg room for five occupants.

FINISH. In upholstery and appointments it is fully equal to the highest priced cars.

SPECIAL FEATURES. The least vibration of any car of its class. All working parts easily accessible and well protected. Light feed oiler on dash keeps all engine bearings thoroughly lubricated. Ample locker space for baggage. A 10,000-mile test applied to each of several cars, selected at random, brought no accident and revealed no flaws. Every part of this car is "Studebaker" quality.

Studebaker Automobile Co., South Bend, Ind.

Member Association Licensed Automobile Manufacturers

CONTROL. The method of control is the simplest and surest known in automobile practice, and is within the ready comprehension of an inexperienced person. An improved form of planetary change gear, extremely durable and free from noise, is used. Speed may be regulated at will by a foot lever, leaving both hands free for steering. Brakes act both on rear axle and rear wheel hubs. One turn of the crank starts the engine. For complete details write for catalogue.

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New York City, Broadway and 7th Ave., at 48th St.	Kansas City, Mo., 810-814 Walnut St.
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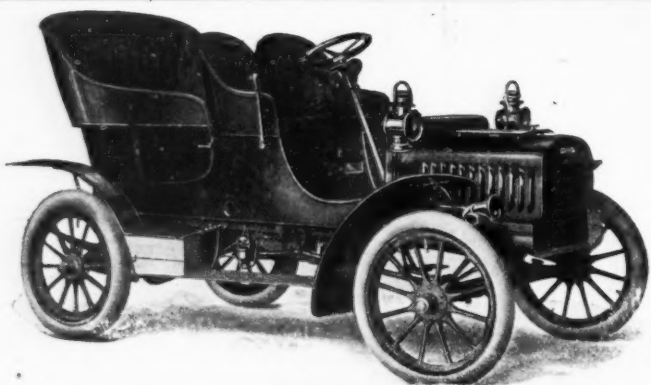
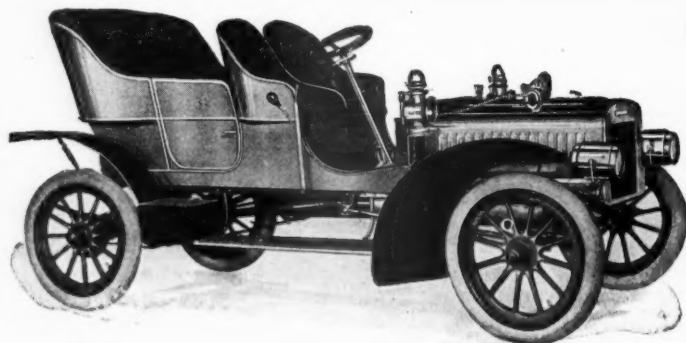
THE MOLINE**Model "B"--Light Touring Car, \$1600**

Four-Cylinder Vertical Motor, 18 H. P.
Shaft drive to Bevel Gear Axle.
105-inch Wheelbase. Standard Tread.
32-inch Wheels. 3 1-2-inch Tires.
Brewster Green Body. Cream Gear.

Side entrance which is positively easy and comfortable.

Compare them with any other car you choose in any way you choose and you are bound to reach the conclusion that we are offering exceptional value.

Both these cars will be at the Chicago Show and you should not fail to see them. We can arrange early deliveries with a few more dealers.

**Model "D"--Touring Runabout, \$1000**

Twelve H. P. Double Opposed Motor.
Planetary Transmission. Chain Drive.
86-inch Wheelbase. Standard Tread.
30-inch Wheels. 3 1-2-inch Tires Rear.
3-inch Tires Front.

Side entrance like the Touring Car, very easy and comfortable.

Moline Automobile Co.
EAST MOLINE, ILLINOIS

THE TRUTH

will come out at the Show, for it is the only time in the year that the agent can draw a true comparison. Usually it takes three days at one factory, a week at another and so on to make a decision but now it is different. A wise agent can make a wise choice in a few hours. He has an opportunity of seeking all the different makes under advantageous circumstances, therefore his selection should be made only after a fair inspection of all the reliable makes. Bear that in mind, Mr. Agent, and we know in advance that your choice will narrow down to a very few different cars. You must not only protect yourself but your clients, and the best insurance obtainable is to represent a line that is manufactured by makers with years of experience. Do this and 50 per cent. of your 1905 troubles are eliminated. Don't be

HOOD WINKED

into buying an untried and unknown proposition; you and your customers cannot afford to pay for experimental construction. We have been building the "Rigs That Run" since 1895 and it ought to mean a lot to you. For over ten years our every energy has been spent in building an American car suitable for American roads and conditions, a car that can be sold to the average individual with the full knowledge that it is going to give satisfaction. Most any manufacturer can sell you a car with his name on it, but very few manufacturers can offer you a car with ten years, "good solid experience" back of it. That's what the St. Louis line means in 1905. Several different styles of commercial cars, all modern and containing exclusive St. Louis features, and our pleasure line stands in a class by itself. 1-2 3-4 cylinders, from 12 to 40 H.P., and ranging in price from \$1400 to \$3000. All we ask is a fair comparison and a demonstration in the "RIGS THAT RUN." See us at the Show.

ST. LOUIS MOTOR CARRIAGE CO , 1211 N. Vandeventer Ave., St. Louis, Mo.

The Latest Creation —

STODDARD-DAYTON

Fast
Silent
Powerful

Catalogue
"A"



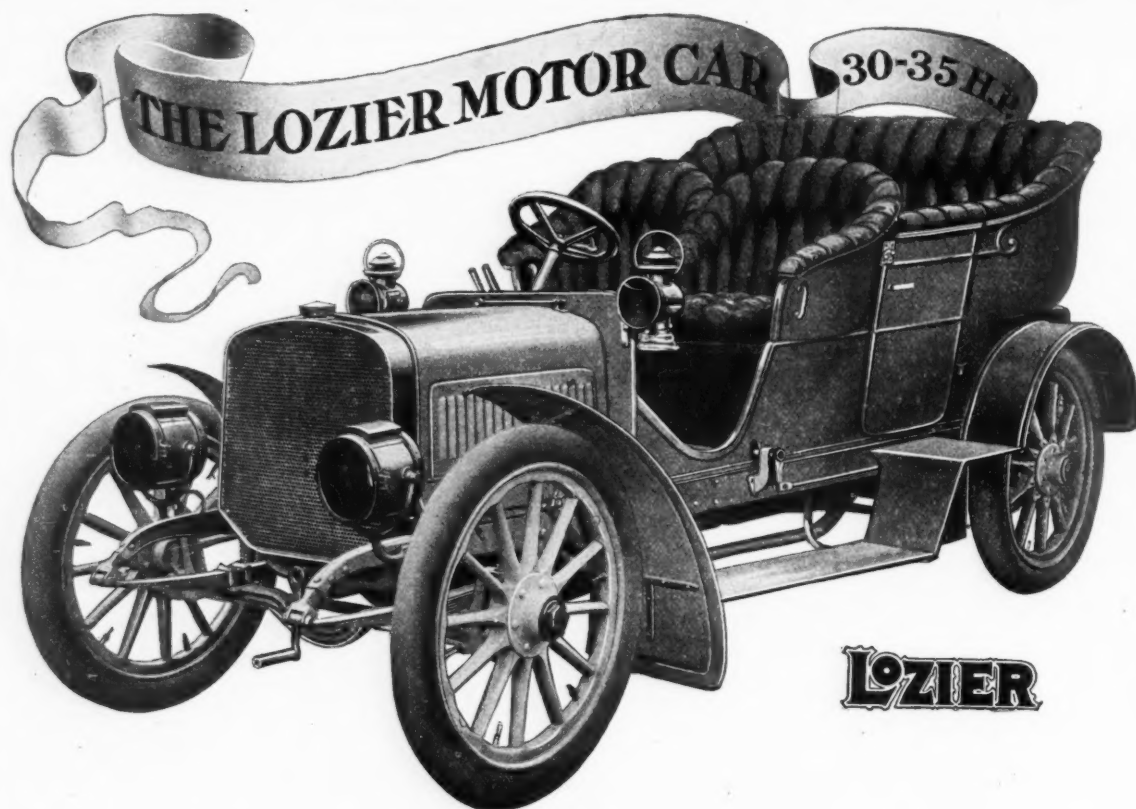
Four-
Cylinder

Vertical
Sliding Gear
3 Ahead
1 Reverse
Shaft Drive
25 h. p.
1800 pounds
and

\$2000.00

DAYTON MOTOR CAR CO., Dayton, Ohio, U. S. A.

McDuffee Auto Co., Distributors for Chicago and Vicinity, 1449 Michigan Ave.



The
Largest
American
Car—

115½ inch
Wheel base
36-inch Wheels
Any Style
Body
Seats 5 to 7
Vertical Type
Motor
Absolutely
Automatic
Carbureter
High-tension
Magneto

LOZIER

Strictly High-grade in Every Particular

Send for Catalogue

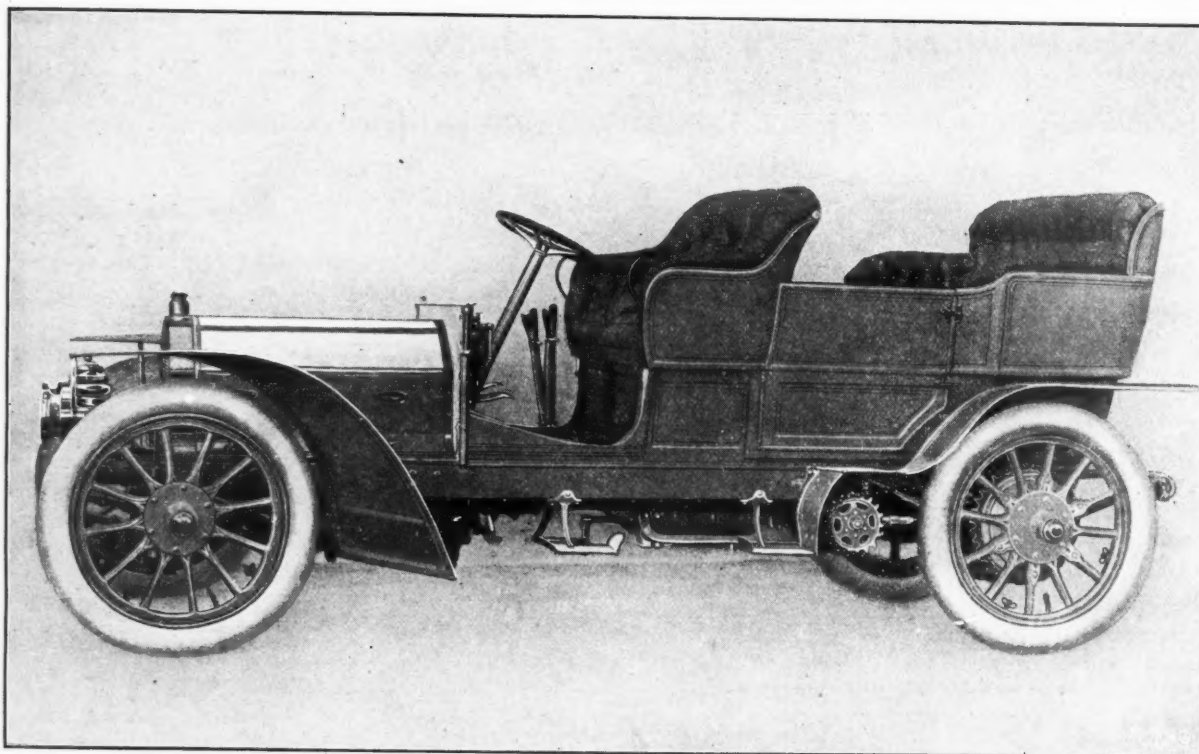
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SEE US AT SPORTSMEN'S SHOW, FEB. 21 TO MCH. 9

THE LOZIER MOTOR CO., New York City, 1 Broadway, Suite 6

BENZ-PARSIFAL MOTOR CARS

Manufactured by BENZ & CO., Mannheim, Germany
Highest Award over all other German Cars at World's Fair St. Louis

Oldest Makers of Automobiles in the World. We will Exhibit a Full Line at the Chicago Auto Show.



12-14 H. P.
2-Cylinder
14-18 H. P.
4-Cylinder
18-22 H. P.
4-Cylinder
24-30 H. P.
4-Cylinder
35-40 H. P.
4-Cylinder

Order NOW for
Spring Delivery

CHICAGO
AGENTS FOR
THE MOLINE
4-Cylinder, \$1,600
2-Cylinder, \$1,000

THE GALE
Runabout, - \$500

MEAD MOTOR COMPANY, 1243-45 Wabash Avenue, Chicago

EXCLUSIVE IMPORTERS, BENZ & CO., MANNHEIM, GERMANY, \$3,000 to \$10,000

Send for Circular No. 8

If you are going to build automobiles you will want this circular. It describes our Axles, Change Gears, Cone Clutches, Mufflers, Steering Gears and other standard parts. All of these parts have been designed with unusual care. They are suitable for cars of all classes.

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ELYRIA, OHIO.**

Selling Agent: HAYDEN EAMES, American Trust Building, Cleveland.

CHICAGO SHOW: Gallery spaces 240, 241, 242, 243 and 244.

The Hussey Drop Forge & Mfg. Co.

AXTELL STREET

CLEVELAND, OHIO

Manufacturers of

**STEERING GEARS, STAFF
DOUBLE CONTROL, AND
WHEEL COMPLETE.....**

Ready to adjust to an Automobile



**Drop Forgings of all Descriptions, especially
Bevel Gears, Crank Shafts, Universal Joints,
Steering Knuckles and Yokes**



PRICES AND CATALOGUE CHEERFULLY GIVEN



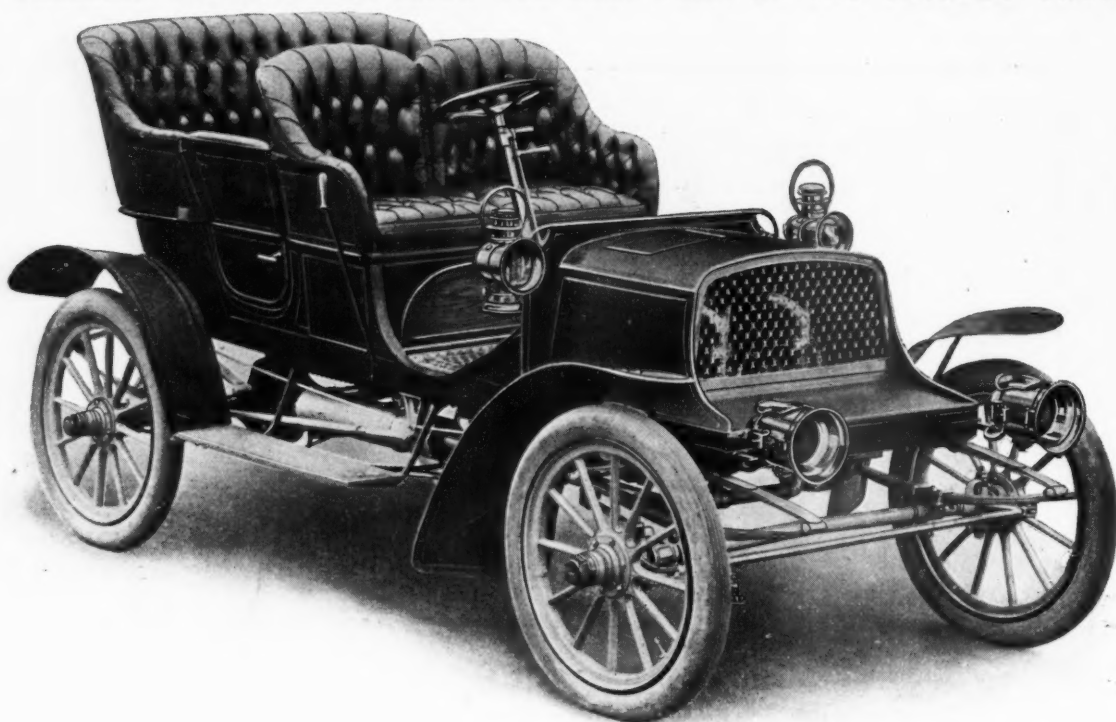
IF YOU MISS THE PREMIER EXHIBIT YOU MISS THE BEST PART OF THE CHICAGO SHOW

PREMIER air cooled cars were among the distinct sensations of the New York Show. Posted drivers and experienced automobile engineers pronounced the PREMIER one of the thoroughly high grade cars exhibited, and it was generally admitted that "The Quality Car" represented better value than to be found in any other exhibit at the show.

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1905 MODEL F \$1500

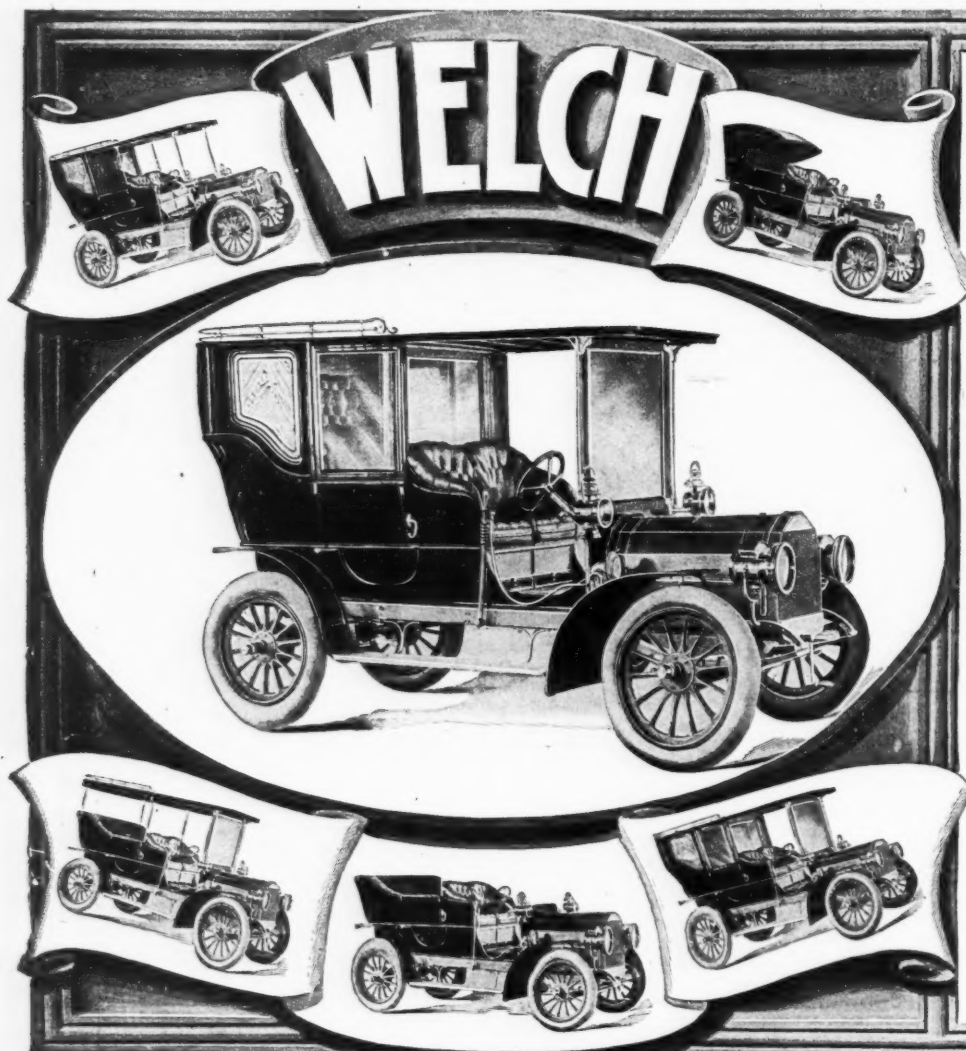
REARENTRANCE
1905 MODEL F \$1400

RUNABOUT
1905 MODEL F \$1250



THE BENNETT BIRD COMPANY, 1404-1406 MICHIGAN AVENUE, CHICAGO DISTRIBUTORS

PREMIER MOTOR MFG. CO., 1001 GEORGIA STREET, INDIANAPOLIS, IND.



WE AIM TO BUILD
**THE BEST
MOTOR CARS**
IN THE
WORLD

SEE OUR EXHIBIT AT THE SHOWS AND
CONVINCE YOURSELF THAT WE DO

A beautiful 30 x 36 h. p. creation, almost instantly convertible from an Open Cross Country Summer Touring Car, to a Superb Pullman Limosine, comfortably heated for winter use, having a speed from 5-50 miles per hour on direct drive. 114-inch wheel base, 36 x 4½-inch wheels. Weight 2800 to 3000 pounds. Price from \$4000 to \$8000.

Welch Motor Car Co.
Pontiac and Detroit, Mich.



NATIONAL, MODEL C.

Side entrance detachable tonneau....divided front seats....five passenger capacity....new round radiator....oval hood, dynamo, storage battery and dry cells....five lamps, generator and horn....tires 34 by 4....positive oiler....luxuriously upholstered in leather.

PRICE, = \$2,500.00

The Best Touring Car Agency in America For 1905

National Motor Vehicle Co.,

1006 E. Twenty-Second St., INDIANAPOLIS, IND.

WRITE NOW

National MODEL "C"

"GOES THE ROUTE"

**With NATIONALS You
Lead - - Others Follow**

Four cylinder 4 1-4x5 vertical.

Bevel gear drive.

Double ball bearing slide gear transmission—direct on high.

Hardened steel gears.

Gear driven commutator.

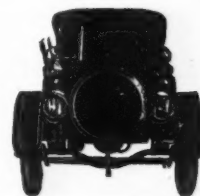
Rear wheels revolve on double ball bearings on outside axle tube.

All weight taken off inner axle and differential.

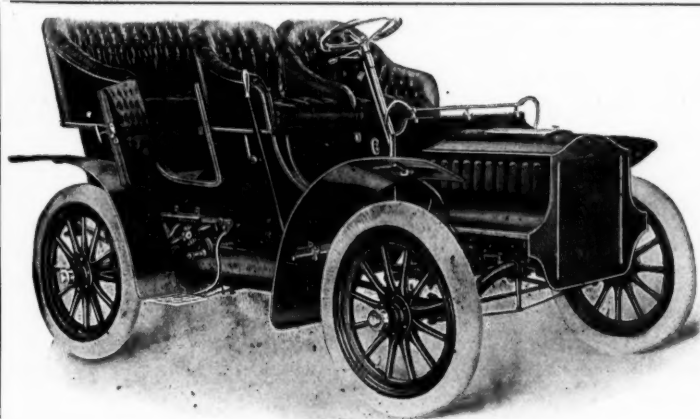
Spherical drive case.

Internal expanding metal to metal brakes.

Pressed steel frame. Long wheel base. Engine and transmission on sub frame. Double steering connections.



What is Horse Power?



Light Touring Car—non-detachable side door Tonneau. Price, \$980.

With some motor car manufacturers it is a very elastic term. They rate their cars as "10-14 horse power"—or "18-24 horse power"—or most anything you want.

Now, we do not wish to suggest that other cars are rated any higher than they test—but we know that with **us** each horse power means

33,000 FOOT POUNDS

of actual work per minute. In other words, the work necessary to lift a weight of 33,000 pounds one foot in one minute, or to lift a weight of 1 pound 33,000 feet in one minute. We also know that *no motor* is put into a "CADILLAC" unless it will develop—by actual test—more than its rated horse power.

We gear our heavier models for a fair turn of speed and *great power*—the lighter ones for both power and speed—and we are confident that we have increased the horse power delivered to the ground.

Does not this interest you? We know it does.

CADILLAC AUTOMOBILE COMPANY,
DETROIT, MICH.

Member of Association of Licensed Automobile Manufacturers.

NON-SKIDDING

SAMSON

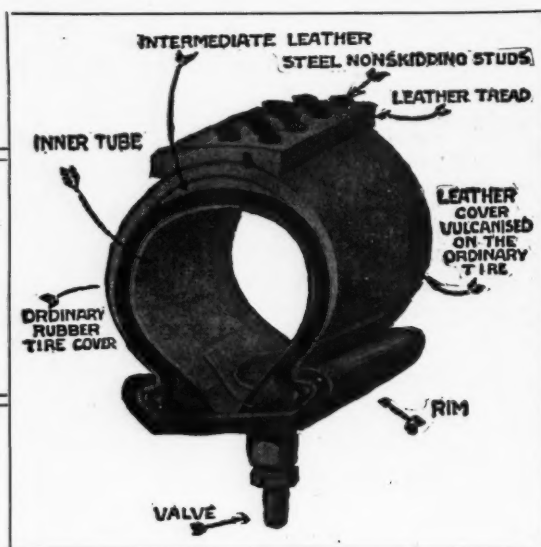
Leather Tire and Protector

NON-PUNCTURABLE

Paris Berlin London Brussels Vienna

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J. B. McKEAGUE
524 Dearborn Street
Chicago



Boston Agent

JAMES COGGESHALL
16 Columbus Ave.
Boston

A. E. GALLIEN, Mgr.

12 West Thirty-third Street, New York City
Opposite The Waldorf

Notice to the Trade.

We have entered suit against the United States agency of the Michelin Tire Co. for infringement of G & J Patents, and the trade is warned against the purchase of such tires.

The following manufacturers are licensed under G & J patents:

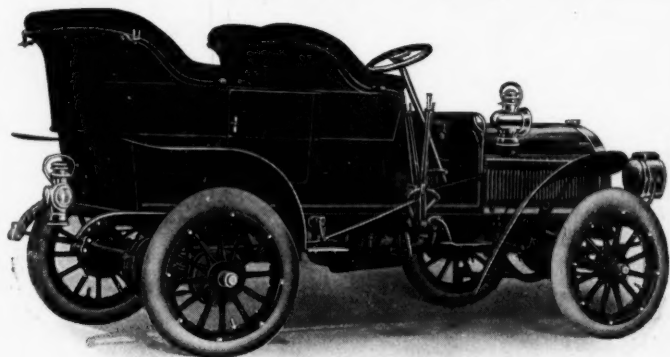
Hartford Rubber Works Co.
The B. F. Goodrich Co.
Diamond Rubber Co.
Morgan & Wright
Fisk Rubber Co.

Continental Caoutchouc Co.
Goodyear Tire & Rubber Co.
International Auto & Vehicle
Tire Co.
India Rubber Co.

G & J TIRE CO., MAIN OFFICE AND FACTORY **Indianapolis, Indiana**

Stevens-Duryea

New 20-Horsepower 4-Cylinder Touring Car, Model R



In the new STEVENS-DURYEA Touring Car we have produced a vehicle perfectly adapted to the needs of the tourist, due to its great strength, high power, and light weight, combined with the fact that there are no low hanging parts between front and rear axles, thus causing contact with road obstructions. Owing to its compactness and light weight our machine is suitable for practically all purposes for which a Runabout is ordinarily used.

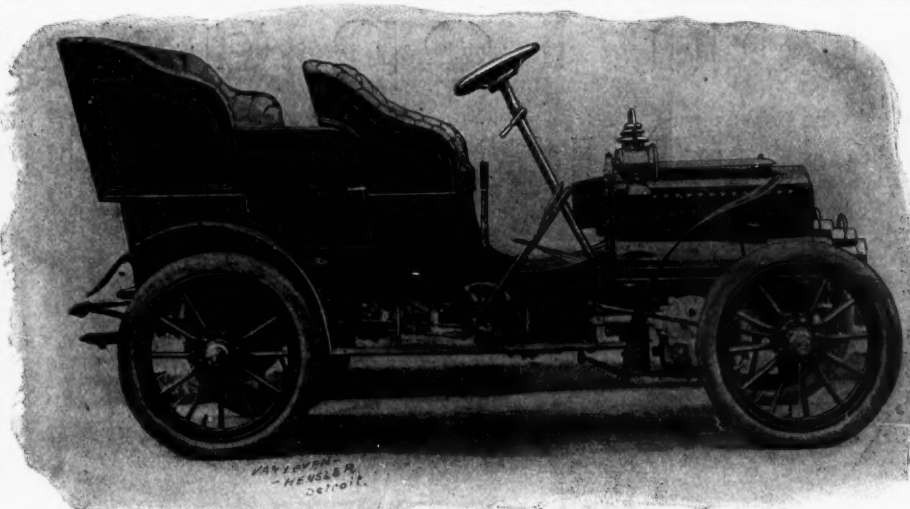
THE MANIFOLD JOYS OF AUTOMOBILING ARE EMPHASIZED IN THE HIGHEST DEGREE POSSIBLE BY TOURING IN THE **STEVENS-DURYEA**

Send for beautifully illustrated 32-page Booklet, containing full details of our car

AGENTS: Write for special proposition on unoccupied territory

J. STEVENS ARMS & TOOL CO., 705 Main Street
CHICOPEE FALLS, MASS., U. S. A.

Members Association Licensed Automobile Manufacturer



Chainless Wolverine Model "D"

REMEMBER!

Space 165-166 Chicago at Coliseum

**Agents Who Want
A Seller**

A CAR THAT WILL "STAY SOLD"

With all the specifications of \$3,000 cars, with 20 H. P., sliding gear transmission, 3 speeds ahead, direct drive, two cylinder opposed, set

crosswise in front, and above all a car SIMPLE in construction and operation, should get a demonstration early at shows in order to secure valuable territory. Best discount, and generous terms and contracts to agents. New Catalog.

PRICE, \$1,600

Reid Manufacturing Company

Dept. "D"

DETROIT, MICH.

ANNOUN **DURO** CEMENT

A complete line of DURO Batteries, MOTOR Batteries, and DURO Electric Lamps, will be exhibited at the Chicago Show by the following houses:

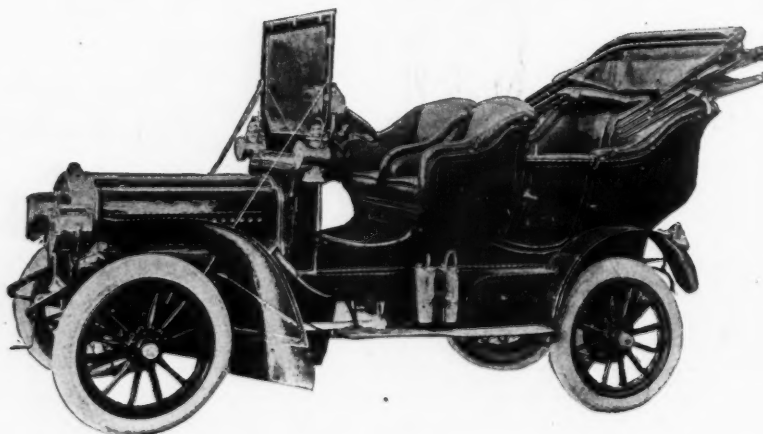
AUTOMOBILE SUPPLY COMPANY
BECKLEY-RALSTON COMPANY

EXCELSIOR SUPPLY COMPANY
MOTOR CAR SUPPLY COMPANY

You are cordially invited to inspect our output at any of the above booths, or at our own exhibit, spaces 305 and 306. Public telephone in booth, South 1421.

CHICAGO BATTERY COMPANY
1421 Michigan Avenue CHICAGO, ILL., U. S. A.

Extension Top as a Wind and Dust Shield



COL. SPRAGUE'S PATENT EXTENSION TOP
thrown back for a dust shield with glass front for wind, shield.

EXCLUSIVELY USED ON THE THOMAS AND LEADING CARS

MADE BY
.....THE

SPRAGUE UMBRELLA CO.

NORWALK,
OHIO

PREST-O-LITE GAS TANK

No Cleaning of Generators
No Carbide Supply to Carry
No Water Needed



NO WASTE
NO ODOR
NO ATTENTION

Lights Always Stay Lit and of the Same Brilliancy

Dealers and Garage Men Take Notice

PREST-O-LITE GAS TANKS will be "all the go" in future. There will be a great demand for them, and to hold your custom, you will have to supply them on demand. You'll want to do so when you know their value. One charge lasts the average user two months, and no odor, no trouble, better light. Owners do not return tanks to us to be charged, but exchange with agents. We will demonstrate their unexcelled features and arrange for agencies at CHICAGO Auto-Show. Look us up there or write for details now. Over 300 agencies already arranged—126 placed at the New York Show—better get in line at once.

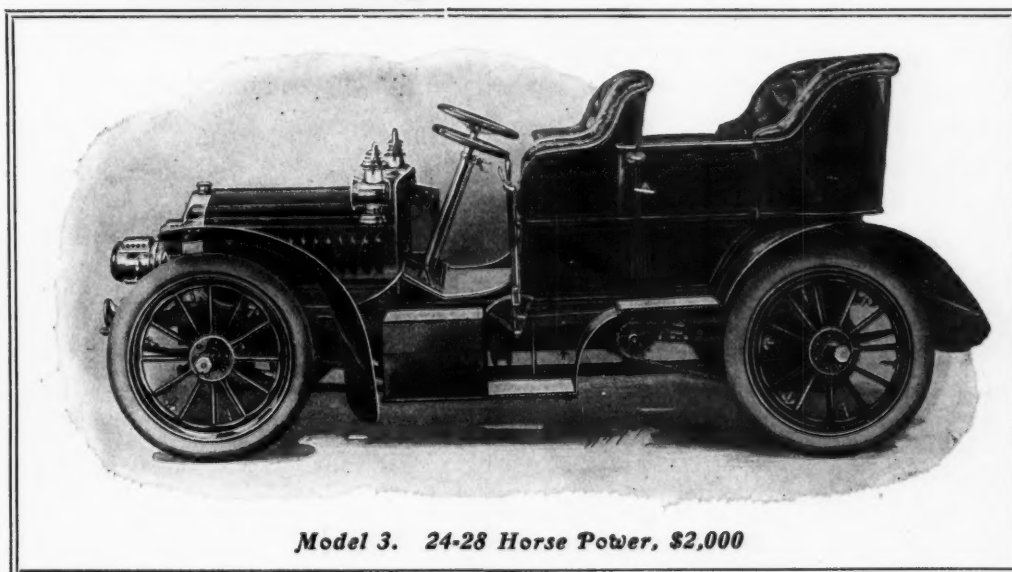
The Concentrated Acetylene Company

330 North Illinois Street

INDIANAPOLIS, INDIANA

The Compound Gasolene.... Automobile

The
Sensation
of the
N. Y. Show



No
Muffler
but Quiet
as any Car

Model 3. 24-28 Horse Power, \$2,000

EXHAUST USED FOR POWER NOT NOISE

THE E. H. V. CO., Middletown, Conn.



NON-FLUID OILS

Do not drip and waste like the corresponding fluid oils, nor gum up the bearings and decrease the mechanical efficiency of the engine like greases.

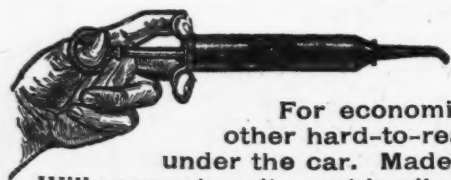
The two gravities below are most used for Automobile Lubrication

"K-No. 000" MARK

For use in Compression Grease Cups, Differential Gear Cases, Planetary Transmission Gear Cases, Ball Bearings, Roller Bearings, Axles, Cardan Joints, Bearings of Steering Gear, etc.

"K-No. 00 SPECIAL" MARK

Especially for use in Sliding Gear Transmission Cases. Does not throw out of the case as fluid oil does. Also for Ring-Oiling Bearings of Motors on Electric Vehicles, etc. (Does not leak onto armatures, thus prevents short circuits.)



N. F. O. AUTO LUBRICANT GUN

1905 MODEL

For economically and conveniently applying Lubricants in the Transmission or other hard-to-reach parts. Can be operated with ONE HAND. This saves crawling under the car. Made of heavy gauge seamless brass tubing and has seamless spout. Will soon return its cost in oil saved and last a life time. Belongs in your tool equipment.

MANUFACTURED EXCLUSIVELY BY

NEW YORK & NEW JERSEY LUBRICANT COMPANY

14 & 16 CHURCH STREET, NEW YORK CITY

79 NINTH ST., SAN FRANCISCO

THE FINAL TRIUMPH

Achieved by the Maxwell Cars at the great Automobile Show in Madison Square Garden, New York, was as conclusive to the public as it was satisfactory to us.

We had expected it, and worked for it, but even to us, who knew just how worthy of praise the "MAXWELL" is, the great volume of favorable comment, the almost unanimous appreciation of "MAXWELL POINTS" throughout that enormous gathering of automobile experts came as somewhat of a surprise. There is but one conclusion to be drawn: That the automobile public is no longer dependent upon the statements of manufacturers and agents; that buyers have learned to discriminate for themselves; that they know what they want, and having found in the "MAXWELL" those points which make it the most practical, the most reliable and the most economical automobile in the market, they have been quick to give it their appreciation and their patronage.

**16 H. P. Touring
Car, \$1400.00**

The "MAXWELL" cars have no pump (thermosiphon). Their double opposed motor shaft drive is in front under the hood and accessible in every part. They have Bevel Gear Drive. METAL BODIES. Transmission Case and Crank Shaft cast in one Aluminum Casting. Perfectly simple, simply perfect. : : : :

**8 H. P. Tourabout,
\$750.00**

MAXWELL-BRISCOE MOTOR CO.

New York City Salesroom: 317 W. 59th St.

TARRYTOWN, N. Y.

The Reliable
Waterless Knox
 Cars for 1905

Higher in Quality



Superb in Style and Finish

The Knox 1905 two-cylinder air-cooled machine is as quiet and smooth working as any four-cylinder machine, with only half its complications.

AWARDED GRAND PRIZE
 at the Universal Exposition
 St. Louis, 1904

14-16 H. P. Side Door Tonneau, \$1900

14-16 H. P. Convertible Surrey, \$1750

14-16 H. P. Folding Front Seat Runabout, \$1500

Single Cylinder Folding Front Seat Runabout, \$1250

1905 Models will be on exhibition at the Chicago
 Automobile Show.

KNOX AUTOMOBILE CO.,
 SPRINGFIELD, MASS.

Members Association Licensed
 Automobile Manufacturers

Selling Agents in all Principal
 Cities

Peerless

The Car
 of
 Achievement

**SECOND IMPRESSION
 OF A PEERLESS CAR**

COMFORT

You are not only impressed with the beauty of a Peerless Car, but also with its comfort and

EASE IN RIDING.

This is a mechanical problem that goes far deeper than mere upholstery. It depends on the size of the tires, length of wheel base, the spring construction and

DISTRIBUTION OF WEIGHT

of the car.

A ride in a Peerless Car will convince you that these important requirements have all been fully and perfectly met. You are not bounced to pieces over rough roads, but you are pleased to see how the Peerless runs along as smoothly, silently, and comfortably as a Pullman.

24 H.P.	30 H.P.	35 H.P.	60 H.P.
\$3,200	\$3,750	\$4,000	\$6,000

Send for Catalogue now ready.

PEERLESS MOTOR CAR CO.
 CLEVELAND, OHIO
MEMBER A. L. A. M.

"A WORD TO THE WISE"

MR. DEALER

For your own good,
and ours as well,
let us ask you to

JUST WAIT

Before definitely
deciding upon your
entire line for 1905

UNTIL YOU SEE

For yourself, and
personally examine that
finest of all fine cars,

THE HAMMER

An up-to-the-minute 24
h.p. 4-cylinder car that is
sure to create a sensation

AT THE GREAT CHICAGO SHOW

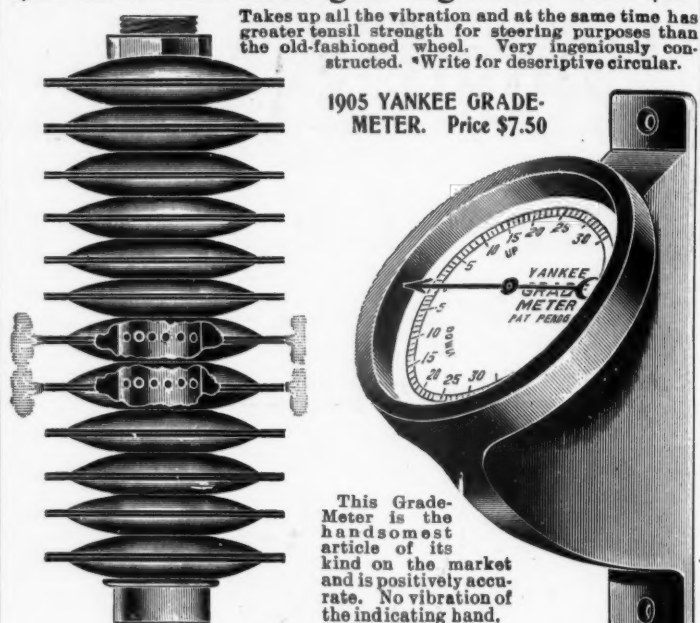
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RETAIL

THE LARGEST
MFR OF **AUTO SPECIALTIES** IN THE
WORLD

1905 Yankee Non-Vibrating Steering Wheel. Price \$10



Takes up all the vibration and at the same time has greater tensile strength for steering purposes than the old-fashioned wheel. Very ingeniously constructed. *Write for descriptive circular.

1905 YANKEE GRADE-METER. Price \$7.50



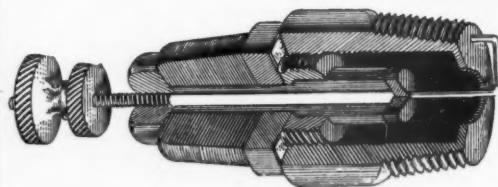
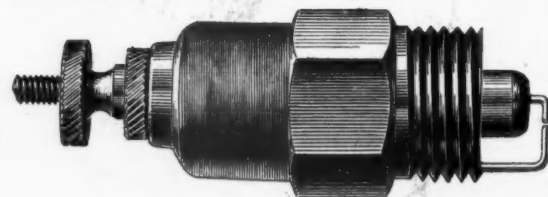
This Grade-Meter is the handsomest article of its kind on the market and is positively accurate. No vibration of the indicating hand.

YANKEE MICA SPARK PLUG

Closed

End

\$1.50



Open End

\$1.00

Both Guaranteed 90 days. Thousands in use and no complaints.

Yankee Cut-Switch

Price \$1.50

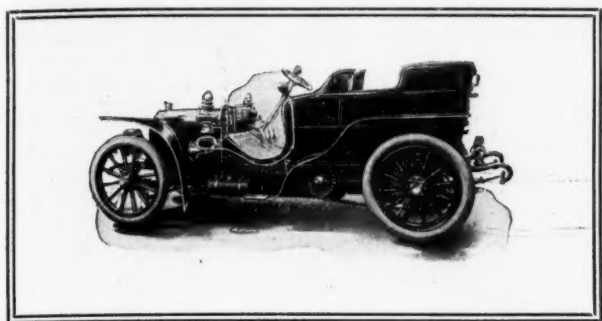
Switch blade instantly detachable, which locks your car in your absence. Cannot be short circuited. May use two sets of batteries, separately or alternately, or you may double your amperage at will.



We also Manufacture QUICK CHAIN REPAIRERS, sell for 50c; FOOT BELLOWS FOR HORN, sells for \$3.00; WIND SHIELD FOR TONNEAU; BATTERY CONNECTIONS, sell for 36c doz.; REPAIR PLASTERS, \$1 each. We manufacture 30 other good selling Auto Specialties. Cuts furnished free to Jobbers and Dealers. **BIG FREE CATALOG.**

Discount to Manufacturers, Jobbers and Dealers

E. J. WILLIS CO., 7 Park Place, N. Y.



Mercedes Design

Acknowledged the *ne plus ultra* of automobile perfection.

Mercedes Materials

The strongest, the stiffest, the most enduring in the world.

Mercedes Workmanship

The kind which slight nothing, forgets nothing—the German kind.

The American Mercedes

Embodies them all.

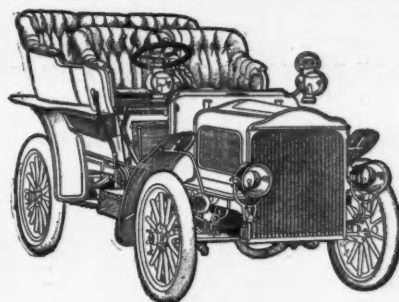
One size: 40-45 horse power.
An exact replica of the 1905 Mercedes built by the Daimler Motoren Gesellschaft, formerly of Cannstatt, now of Unterturkheim, Germany.

Our Booklet Tells the Story

ADDRESS

Daimler Mf'g Co.,

973 STEINWAY AVENUE,
LONG ISLAND CITY, NEW YORK



Performances

...of the...

15 H.P. WHITE

(Stripped and Provided with Wind Shield)

At ORMOND, FLORIDA



TIME TRIALS

1 mile 53 seconds

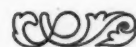
1 kilometer 32 $\frac{4}{5}$ seconds

CLASS B RACES

(851-1432 Lbs.)



First in One Mile Race
First in One Kilometer Race



WHITE SEWING MACHINE COMPANY

CLEVELAND, OHIO

1905 ANNOUNCEMENT

The Autocar

A New Type

We believe that the Autocar in all its types represents the highest excellence in automobile design, workmanship and material. Every Autocar is built on honor. We feel, therefore, that our new type will meet with a cordial reception.

This car, **Type XI**, larger and more powerful than the other types, has a four-cylinder vertical engine of 16-20 horsepower. The body is built on the newest and most approved French lines. The front seat is divided and both front and rear seats are large and comfortable.

While this car is built upon the tried Autocar principles which have been so splendidly proven, it shows a number of very important improvements making for increased simplicity, ease of operation, safety and comfort.

In fact, though Autocars have always been noted for absence of bewildering intricacy of mechanism, yet no one can but be impressed with the extreme simplicity of this new car. It is a triumph in scientific construction and arrangement.

This car has more than met our highest expectations in the road test. In fact its performance has been a surprise to experienced automobile men. The power of the car carries it, fully equipped and loaded with five passengers up tested 12 per cent grades for instance, at 20 to 25 miles per hour on the direct drive, while on the level the car attains a speed of 40 to 45 miles. The car is a superior climber on any hill.

Altogether our eight years' experience has enabled us to produce in this type, a four cylinder car we are assured cannot be surpassed by any similar car at any price.

The Price of **Type XI** is \$2,000. Ready for delivery January 16.

Type VIII.—Four-Passenger Car (at \$1,400) and **Type X**.—Runabout (at \$900) have made Autocar Reputation. Each stands at the head of its class for value and efficiency.

Catalogue descriptive of the 1904-05 types will be sent free upon request. This catalogue contains also addresses of our dealers throughout the country who will be glad to give demonstrations to prospective automobile purchasers and explain in detail the merits of our cars.

THE AUTOCAR COMPANY
ARDMORE, PA.

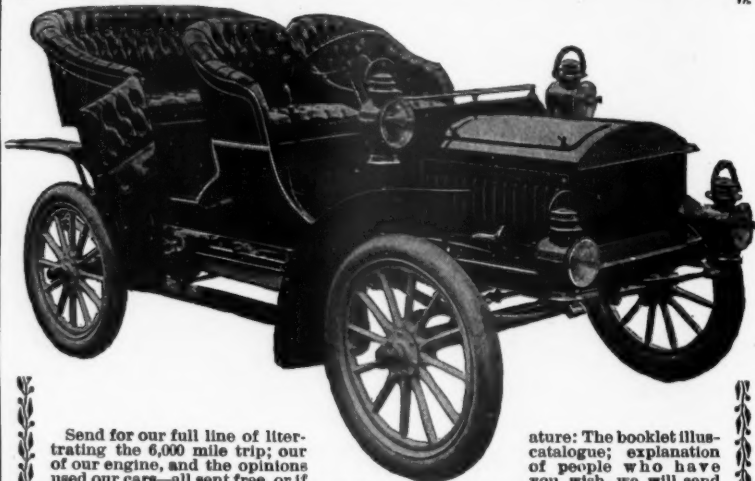
Member Association of Licensed
Automobile Manufacturers.

TWO IMPULSES WITH EVERY REVOLUTION

This the famous **Elmore Pathfinder** which has demonstrated beyond a doubt the superiority of the two-cycle engine over the four-cycle engine. The most significant feature of the American Automobile situation today is the complete triumph of the impulse-every revolution idea, or with two cylinders, two impulses every revolution, as exemplified in the **Elmore**. That the **Elmore** does produce a constant torque; that it does utilize every particle of power and put a stop to waste energy; that it will take the steepest hill or roughest road at high speed; and that it has the most reliable self-starting engine in the world. For each and every one of these claims overwhelming proof has been produced.

The whole trend of expert and popular opinion is rapidly being directed toward the two-cycle engine.

You owe it to yourself to see this car which will astonish you, not only by its fine appearance, but by its excess power and its extraordinary control on the high speed.



Send for our full line of literature: The 6,000 mile trip; our of our engine, and the opinions used our cars—all sent free, or if you a 10x12 Photograph of the Pathfinder on receipt of 10 cents in stamps.

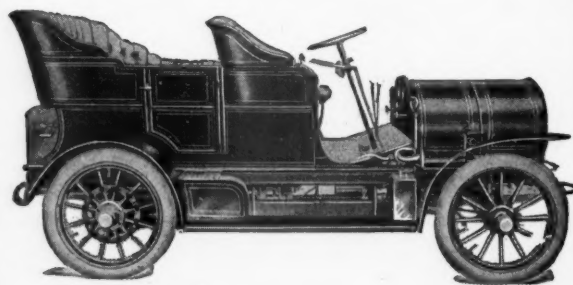
ature: The booklet illustrating the 6,000 mile trip; our of our engine, and the opinions used our cars—all sent free, or if you a 10x12 Photograph of the Pathfinder on receipt of 10 cents in stamps.

ELMORE MANUFACTURING COMPANY

804 AMANDA STREET,
CLYDE, OHIO

Members of the Association of Licensed Automobile Manufacturers

THE EXCELLENT



GROUT

No Noise.

No Vibration.

Will not freeze in zero weather.

Climb any Hill. Speedy and Reliable.

Grout Bros. Automobile Co.

284 Main Street, Orange, Mass.

Boston Branch—151 Columbus Ave.

YOU WILL FIND EVERY MANUFACTURER OF
AUTOMOBILES AND ACCESSORIES AT THE

CHICAGO SHOW

FEBRUARY 4 TO 11, 1905

For details of railroad rates, consult American Motor League, Vanderbilt Building, New York, whose officers will indorse certificates held by **members only**.

No reduced rate has been granted on account of the Show.

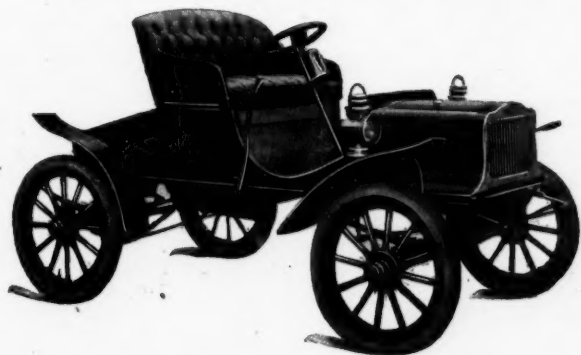
Morning sessions closing at noon, free to the trade on presentation of business card, or other proof of identification.

S. A. MILES, Manager

New Southern Hotel

Chicago, Illinois

The \$500 Gale



WE wish to state that because this car is sold at so low a figure, is no sign that it is cheap. Every part is the best that we can make or buy, and we will replace any defective parts free of charge at any time inside of one year after purchase.

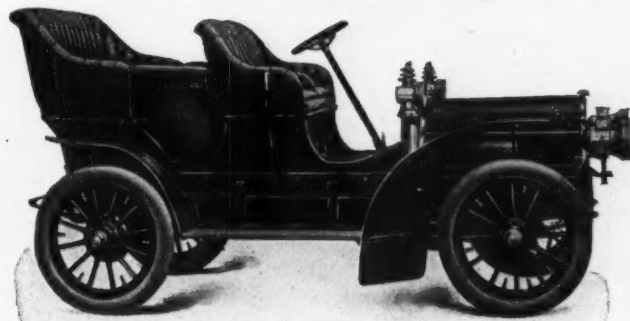
Eight H. P., horizontal single cylinder 5"x6"; weight, 1,100 lbs.; 72" wheel base; 28"x3" tires. New-type transmission; two speeds, forward and reverse; absolutely oil tight; cone clutch on high speed; new-type bands on low and back up; no gears running on high speed. Pump direct connected to engine. Gasoline and water tanks hold five gallons each. Kingston carburetor, Dow vibrator coil, Brown & Lipe differential, diamond chain. Speed, 30 miles per hour. Frame, angle iron. Body can be tipped up by loosening two nuts in floor of car and removing cotter pin. Car can be run without body, as all wires, connections, etc., are on the chassis.

GOOD TERRITORY OPEN TO LIVE AGENTS
WRITE FOR PRINTED MATTER

THE WESTERN TOOL WORKS, Galesburg, Ill.

The Marmon

A Mechanical Masterpiece



1905 Model

Price \$2,500

THE HISTORY OF AUTOMOBILES

Records no greater achievement than Double Three-Point Suspension, an exclusive Marmon feature. Body and mechanism are on separate frames, each hung on three points. Can you conceive the flexibility and its effect on body and engine, and repair bills? No binding strains. Transmission never out of alignment. 20 H. P. in the Marmon exceeds 35 H. P. in many other cars of high repute. The independent suspension of the body and its removal from the engine give the Marmon a gentle sway over rough roads that is unknown in any other car.

You ought to read a full description of the many other exclusive and successful Marmon features—novel motor, rigid shaft drive without Cardan joints, perfect automatic lubrication, simple control. Ask for it. The Marmon is "A Mechanical Masterpiece," in whole and in every part, backed by a guarantee respected the world over for fifty years.

NORDYKE & MARMON COMPANY

Established 1851

Indianapolis, Indiana.

The Von Schwarz

None Genuine Without
J v S
on Tip and Pillar

Acetylene Burners

SOME ADVANTAGES

They are Recognized Standard Burners the World Over

Accurate in consumption. Free from carbonization and other troubles, and they are

Licensed under Patent 589342, August 31, 1897. This patent has been adjudicated by the U. S. Court of Appeal and IS VALID.

We advertise not only our burners, but also those firms who confine themselves to equip their lamps with **Licensed Burners.**

Is there any reason why you should equip your lamps with cheap infringing imitations? **Protect your customers as we do protect you.**

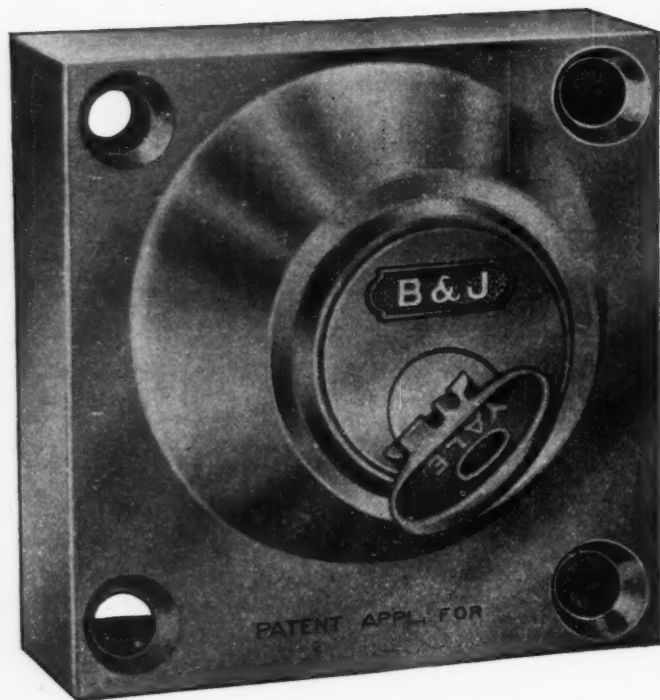
For Information and Prices Apply to

H. KIRCHBERGER & CO.,

GENERAL LICENSEES,

50 Warren St., New York

The only Lock that is a Lock
The B. & J. Lockswitch



Applicable to any car. As reliable as a bank vault lock.
As long as you have the key your car is safe.

ASK US MORE ABOUT IT

B. & J. MFG. CO., Chicago, Ill.

HAND BOOK OF GASOLINE AUTOMOBILES

Issued for the Information of
the Public who are interested in
their Manufacture, Sale and Use

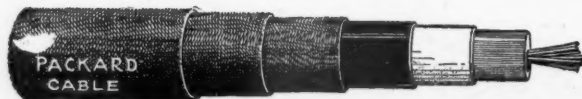
This new edition of this handsomely bound and artistically printed book containing illustrations of about 125 gasoline cars will be ready for mailing about Feb. 1st, 1905. The products of the principal manufacturers throughout the United States of America and the Importers of gasoline machines are shown by illustrations and specifications. These specifications form a series of the leading questions that arise in the mind of the purchaser, with the answers thereto in red ink. The questions being uniform, the ease of comparison is obvious, and the purchaser is enabled to select the machines which are best suited to the service required, to his personal taste, or the means at his command.

The 1904 Edition is Now Out of Print

Sent on Receipt of 6c
in Stamps for Postage

Association of Licensed Automobile Mfrs.
Room 1011, 7 East 42nd Street, New York.

Packard Enameled Ignition Cable



An entirely new method of making

A Sure-thing Insulation

Thread wound-tape wound-woven with intermediate coatings of enamel films and many bakings. Unaffected by heat, grease, oil or water. Supple and indestructible.

Send for Booklet "G"

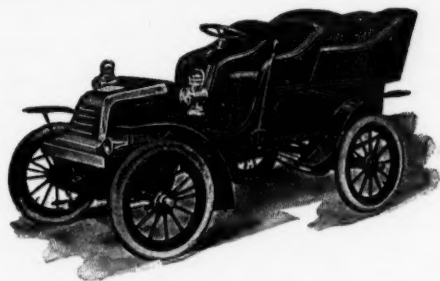
The PACKARD ELECTRIC COMPANY

Warren, Ohio

THE PIERCE-RACINE

A Runabout and Light Touring Car

Its motor is the heart and life of an automobile. Without a powerful and reliable motor, the car will prove unsatisfactory and of no service.



\$750 \equiv **\$850**

AS A RUNABOUT

WITH TONNEAU

19 YEARS MAKING GAS AND GASOLINE ENGINES

Our 8,000 motors, aggregating 50,000 h.p., doing business all over the world. Send for booklet.

FACTS ARE OUR ENDORSEMENTS

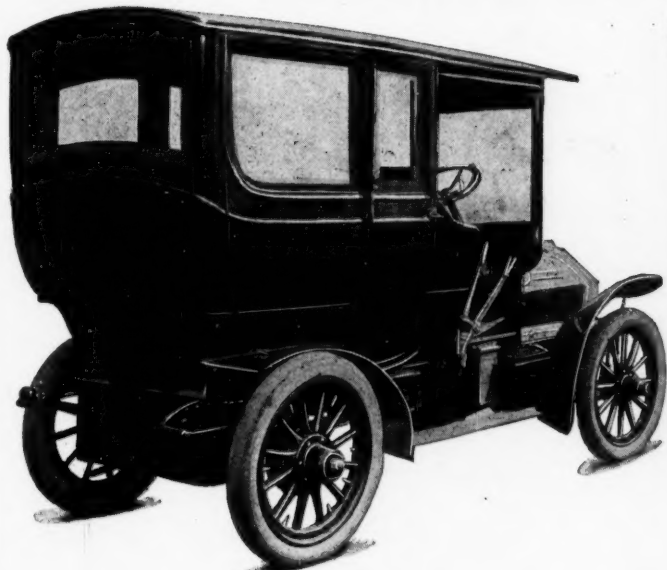
We manufacture a strictly high grade, up-to-date and reliable car, thoroughly covered by our guarantee.

8 h. p. mechanically operated valves; transmission, three speeds forward and reverse; capacity, 180 miles without recharging

PIERCE ENGINE CO., Box 175, Racine, Wis.

WILSON MOTOR CO., Chicago Agts., 1602 Michigan Ave.

COUPE LIMOUSINE



Capacity, five inside, and plenty of room at that. Finish and workmanship GUARANTEED equal to Breuster's best.

WILL BE EXHIBITED AT THE CHICAGO SHOW (AND LATER SHOWS) IN THE PEERLESS MOTOR CAR CO.'S SPACES, No. 57-58-73-74.

The Chisholm - Philips Automobilium Co.,
1322-1324 Euclid Avenue, :: :: Cleveland, Ohio

EXCLUSIVE AMERICAN AGENTS FOR THE SIMMS-BOSCH MAGNETO. USED ON 90 PER CENT OF ALL EUROPEAN CARS

Automobile Supplies Bicycle Sundries

1905 Catalogues Ready
200 Pages

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Jacks
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Tire sundries
Lamps
Horns
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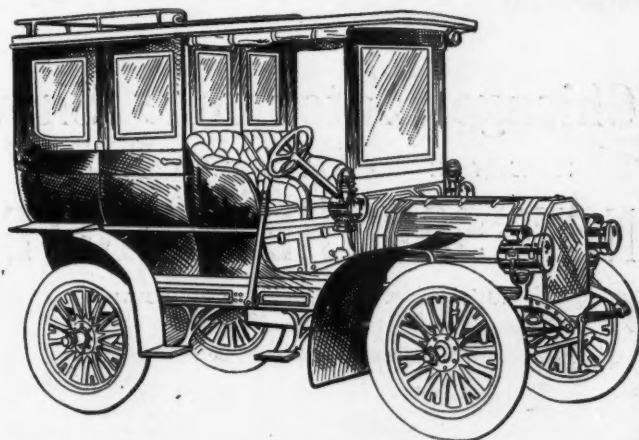
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Clocks
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Every accessory of merit in connection with the line.
All the leading makes

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178 Lake Street, Chicago

Chicago show spaces 307-308.

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HORN

WARNS
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A perfect Horn for Automobilists, gasoline or steam. Blows a full blast from the exhaust with less than one pound pressure. Can be attached to the air tank or blown by steam direct.

Its tone is full and clear, it gives as strong a tone as secured with an ordinary steam whistle under 100 pounds pressure. There is no discordant, screeching note—each horn is tuned to a musical key.

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We will exhibit at the New York and Chicago shows.

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24 H. P., \$5,000
40 H. P., \$6,000

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Practically noiseless.
Absence of vibration.
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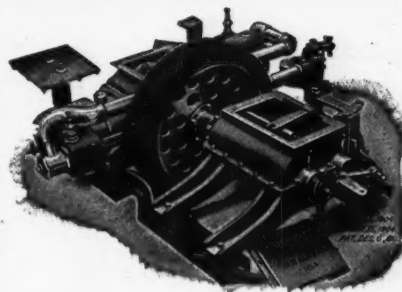
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are unexcelled for simplicity of construction, substantial and large bearings, ease of adjustment. All parts unusually accessible for inspection.

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We make a specialty of Motors for

THOMAS MODEL 18, CADILLAC FORD AND OLDSMOBILE

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GENTLEMEN: The 14-H. P. motor which we purchased of you last January we have mounted in a car that weighs 1,850 pounds. Car has been driven 4,000 miles and the motor has given excellent results and drives the car 40 miles an hour. We made the run from Syracuse to Utica in 2 hours and 20 minutes. Total time from Syracuse to Albany 8 hours; time from Boston to Syracuse 20 hours.

The car weighs with two passengers and luggage 2,350 pounds. We also wish to state that after using several makes of carburetors that we obtained the best results from your make of carburetor.

Yours truly,

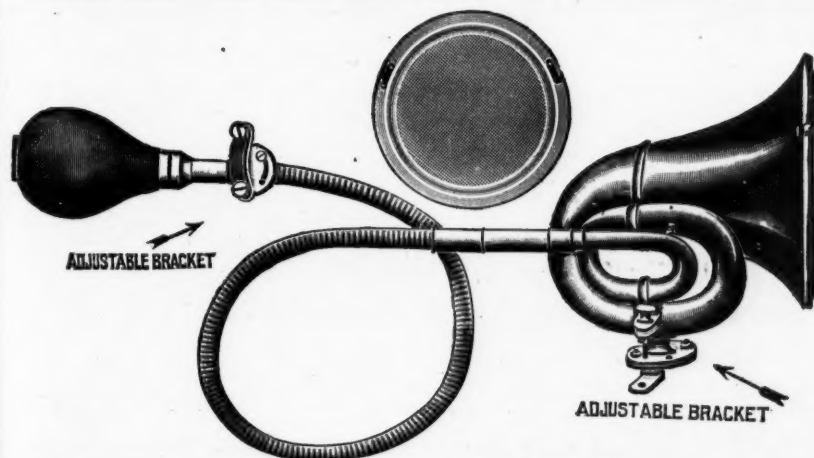
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**Our Jacks Cannot Run
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Notice the spiral which always engages two teeth of the rack, holding the load in any position with perfect safety.



No Dogs or Cams
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Weights Less
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Made in Malleable Iron,
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Ask your dealer to show you their great power and simplicity or write us for description and prices.



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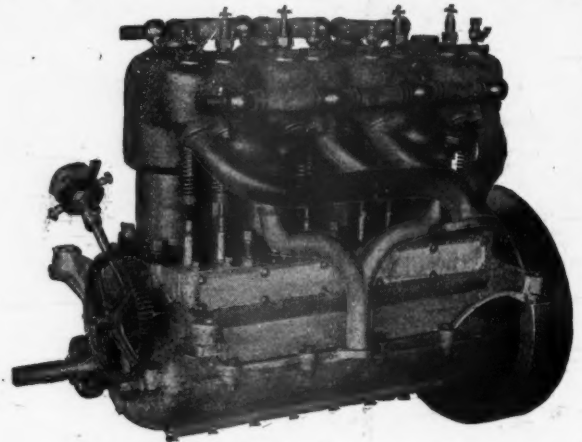
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Manufactured by the
CONTINENTAL ENGINE CO
FISHER BLDG., CHICAGO

Are identified by their Perfection and for their Efficiency in both Automobile and Marine Use.



Type B—Four-Cylinder Engine

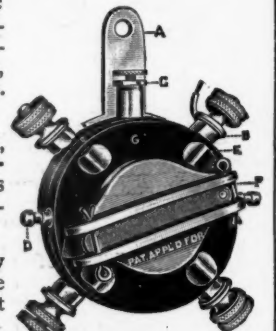
This is one of the ten types that we manufacture and design. We have particular types of Engines and Applications for Pleasure Vehicles, Trucks, Railway Apparatus and Marine Crafts.

ACCESSORIES

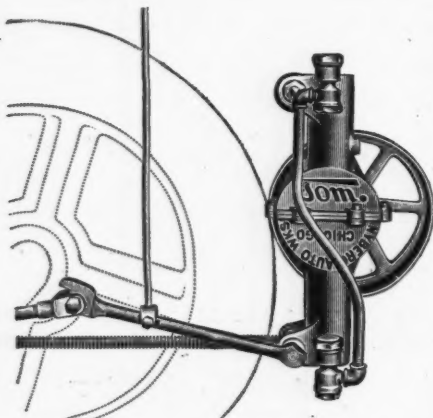
In connection with any type of Engine, our **Carburetor**, our **Friction or Gear Transmission**, and our **Appliances** should always be considered as Accessories so a complete outfit.

Our patented **P. V. TIMER** is absolutely unique and always instant and positive in action. It is really the only perfect and satisfactory Igniter.

Space 328, Chicago Automobile Show



The P. V. Timer



By pulling the vertical rod the toggle joint on the horizontal rod passes over the center and the spring is allowed to press the pump up against the fly wheel.

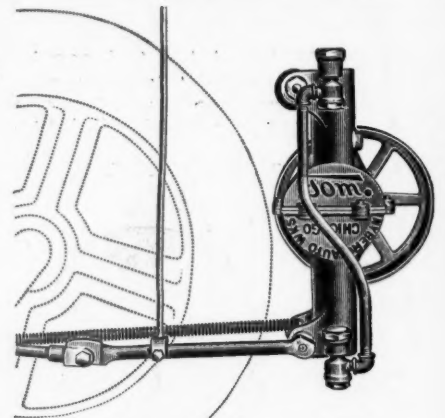
IT'S FUNNY

That you can be willing to pump your tires by hand and work hard when you have a powerful motor on the car doing nothing. Tom is no freak. He is a common, ordinary, double cylinder tire pump in a more compact form, perfectly enclosed and lubricated. He will do your work for years. For sale by all dealers.

Mfd. by NYBERG AUTOMOBILE WORKS, Chicago

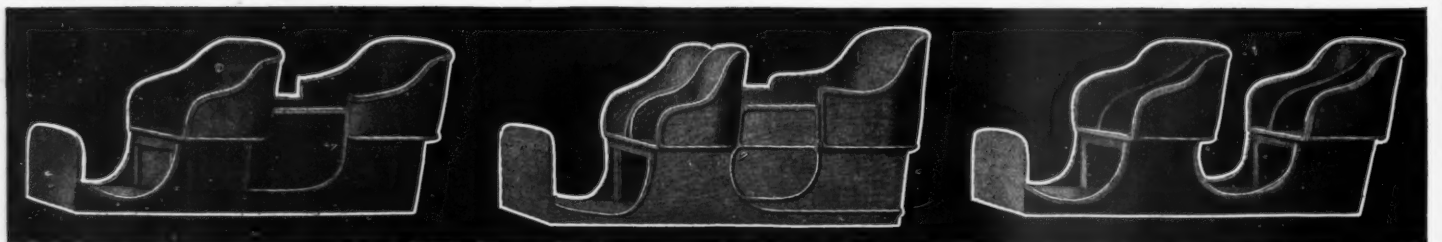
Price complete with brackets to fit any machine, \$25

Tom.



When through with the pump press on the vertical rod so the toggle joint goes back over the center and the spring will hold the pump away from fly wheel. Will work in any position and fit on any machine.

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Remember, we sell all Motor Car Parts Ready to Assemble

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Safe, Speedy and
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THE HAPPY MEDIUM

The St. John Solid Rubber Cushioned Tire

The greatest tire man's ingenuity ever produced.
The tire that solves the most vexing problem now presented to both the manufacturer and private owner of automobiles.
It cannot PUNCTURE. Perfectly RESILIENT. and saves one-third the power now expended on other tires. Fits regular Single and Clincher rims. Easily applied.
Adopt our tire and save annoyance and expense.
Write for our 1905 Catalogue, with testimonials, etc.

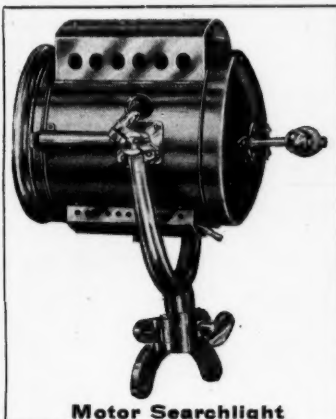
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Are as important as your own. Your very life often depends upon them. Why then take chances when you know and everyone knows that

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At the
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Solars were
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because they
excelled all
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In the non-stop test of Packard car made in August, 1904 Solars were selected as the lamps because they could be relied upon to show the way.

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APPAREL

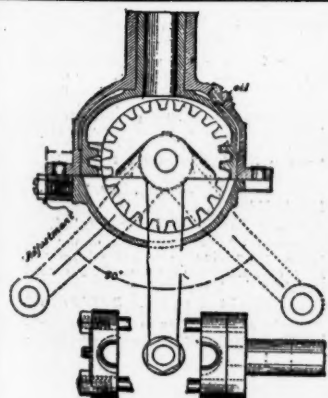
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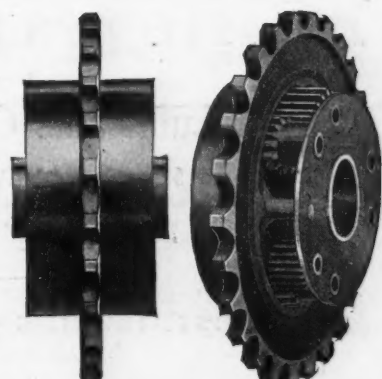


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It's an old established fact that the most successful articles on the market are those that are copied by the manufacturers of similar goods who lack the brains to originate. That's why the

"Soot Proof" Spark Plug

Is receiving so much attention at the hands of this class of manufacturers. Of course our plug is fully protected and it will be a matter of only a short time until we will punish the thieves. In the meantime **Don't be deceived.** They may copy the model, but the results cannot be copied.

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Non-Breakable
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REMODELED under our guarantee that has revealed the inexperience of users in the **Great and Growing Industry** Demonstrations given of how much each will lift at **space 285**, gallery annex, Chicago Automobile Show, Feb. 4-11th, of all old and much that is new.

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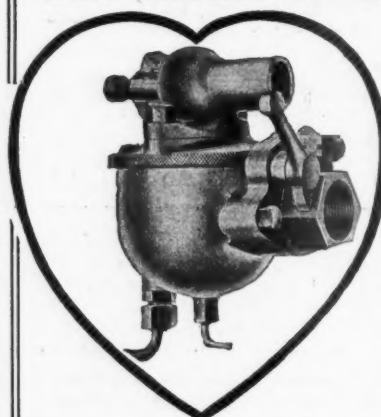
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We have some that have been used for a short time at exceptionally low terms

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The fastest Carburetor in the world —the **Racing Schebler**. The motor car that broke all world's records at the Empire City tracks, November 8th, defeating the 90 h. p. foreign cars, was fitted with a **Schebler Carburetor**. Read this letter from the Ford Company which speaks for itself:

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Dear Sir:—We have yours of the 7th and our machine was fitted with one of your carburetors in its world's record travels. Yours truly,
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Special connections made for attaching the **Schebler** to the 1903-4-5 Oldsmobile. No special connections necessary for any other automobile engine.

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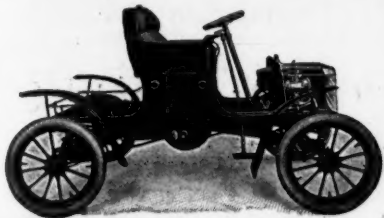
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Its buckboard construction insures "ease of riding without a peer" and its strength and simplicity insure "unlimited service."

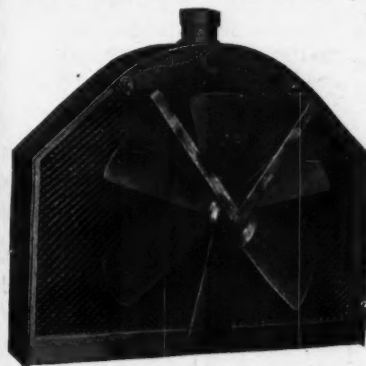


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OUR NO. 2 IS AN AUTOMOBILE SIZE....

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They ACTUALLY "SPIT-FIRE"

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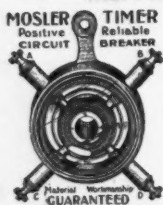
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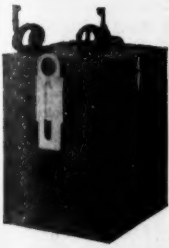
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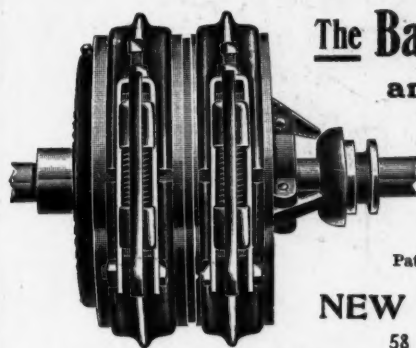
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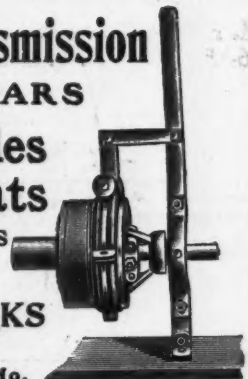
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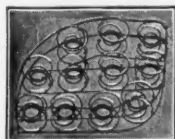


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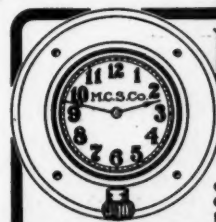
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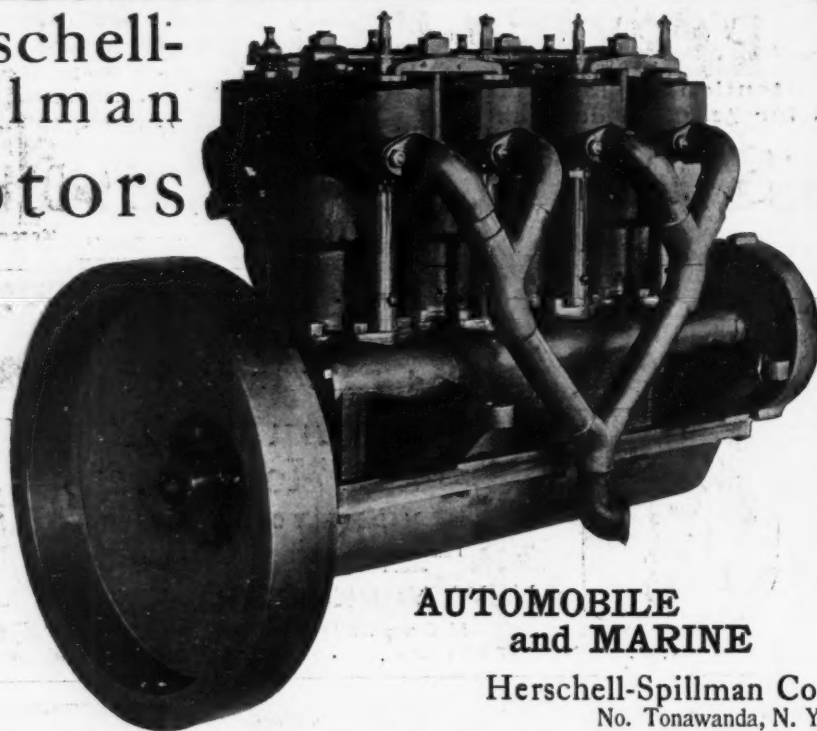
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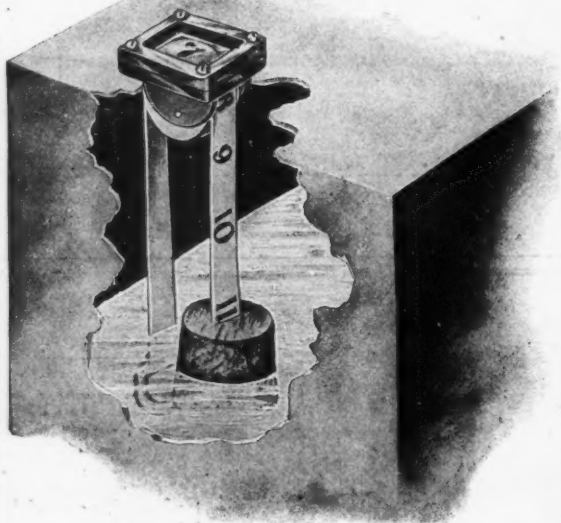
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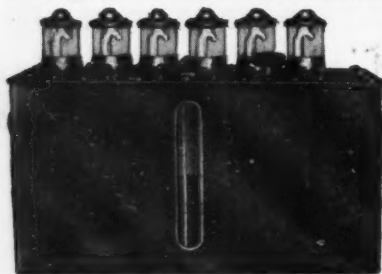
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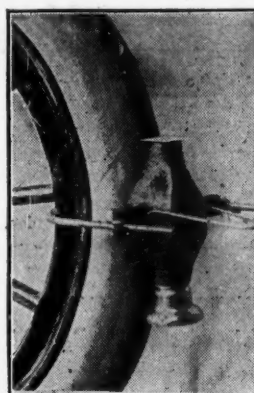
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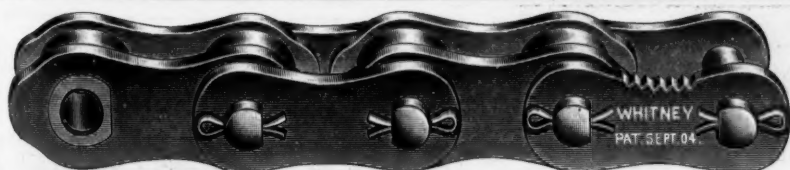
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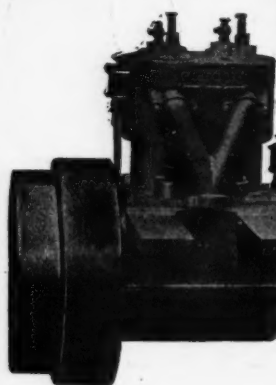
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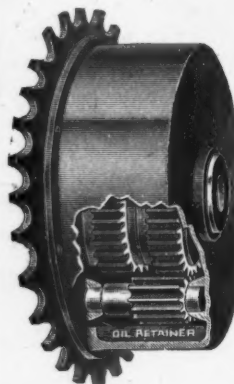
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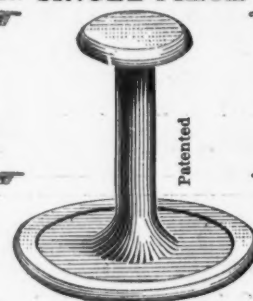
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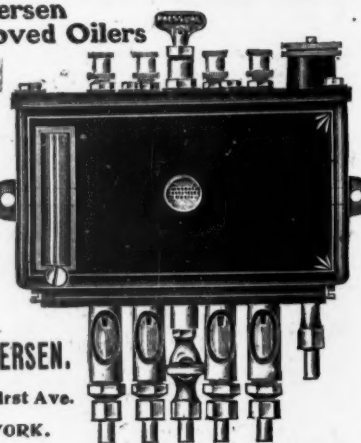
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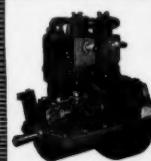
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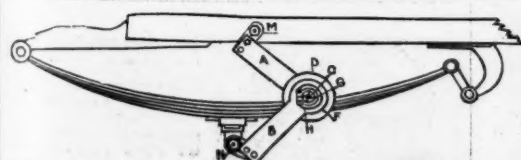
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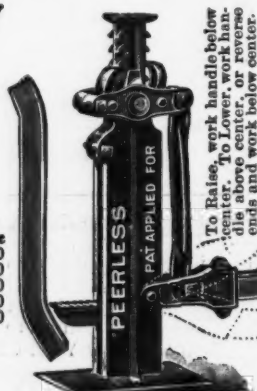
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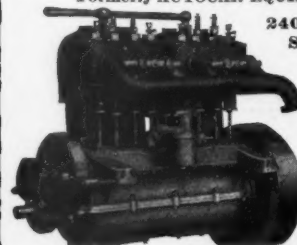
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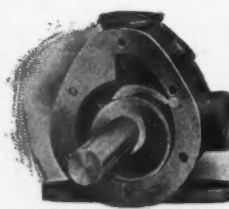
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for general battery testing, 0-15 and 0-20
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The contacts, or both cord and case, are
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WANTED—FOR SALE—We will sell your old car at a good price. We will get you a good second-hand car at a low price. If you want a new car we will get it direct from the factory at factory price. Let us know what you have to sell and we will find you a buyer inside of five days. If you are in the market for a new or second-hand car let us know about what you want and we will immediately submit a list of "just what you are after." We will sell 10,000 second-hand cars this year, and without a dollar expense to the buyer or seller until the sale is negotiated. We have thousands of prospects covering every important city in the country. You cannot sell or buy a second-hand car in your own city at a reasonable price; your local market is too small. With our large amount of advertising we are enabled to put the buyer in Maine and the seller in California in instant touch. We now have a hundred names on our mailing list looking for second-hand cars. Possibly your rig may be the one they are after, and tomorrow may be too late. Write today. Consolidated Automobile Exchange, Binghamton, N. Y.

TRADE—My interest in producing oil wells, pumping station and leases, Indiana field, for touring car. I. O. D. 511 Jackson St., Charleston, Ill.

FOR SALE—Two-cylinder Peerless in perfect condition. Used only one month. Price, \$1,200. Terms easy. George N. Pratt, 100 State St., Chicago.

FOR SALE—\$500 Thomas tonneau, 10 H. P., like new. Used four weeks. Worth double. National electric with top. Good batteries and paint. It's a beauty. \$500. Call or write for photo. Asa G. Neville, Wellsburg, W. Va.

FOR SALE—Columbia 24 h. p. Mark XLI touring car. Mechanical condition first class; trimming practically new and entire car revarnished. Any speed from four to 55 miles per hour. Owners desired to purchase higher powered Columbia car. Address "Mark XLI," care MOTOR AGE.

FOR SALE—I Olds Runabout, with Dos-a-dos seat. Used about 12 months. Has been stored last 4 months. Midgley wheels, clincher tires, two used about 60 days, two used three or four times. A1 order. Ready to run. Tools, etc., complete. \$375. J. W. Winkler, Memphis, Tenn.

WANTED—Automobile double opposed cylinder gas engine, in good condition; 8 to 12 H. P. Give lowest cash price and in what condition. Address F. D. Abbott, 7th floor, Monon Bldg., 324 Dearborn St., Chicago.

SPECIALTIES—A large and well known manufacturing firm (government contractors) in the Midlands, who are doing business with all the first-class engineering and motor manufacturers, is prepared to take over the sole agency for England of any useful specialty. No rubbish required. Highest bankers' and commercial references given. Correspondence invited. Box 2539 Sells, Fleet St., London, England.

WANTED—1903 or 1904 gasoline runabout, 6 to 10 H. P. State guaranteed condition of machine and tires, size of cylinder, model, shop number. C. P. Christensen, Herman, Neb.

FOR SALE—Cadillac B, used as demonstrating car, new 30-inch tires, every part best of order, two brass lamps and horn; \$650.

Oldsmobile, new clincher tires, new top, two acetylene front lamps, used 1,000 miles, paint good and in fine running condition; \$400.

Also Waverly, Autocar, 2-cylinder. Good bargains in second hand cars. Address W. J. Riddell, dealer, Des Moines, Ia.

FOR SALE—1904 White Steamer, brand new, never used; 1903 White Steamer, tires and paint good condition, machinery guaranteed mechanically perfect; 1904 Queen, seats five, clincher tires, \$500. Everything guaranteed in A1 condition. I want to buy White Steamers. C. C. Stoltz, Marion, Ohio.

POSITION WANTED—A young man of character and good habits, thoroughly capable of handling and repairing all makes of automobiles, is desirous of connecting himself with some good agency. Can command capital. Address T. S. Fauntleroy, 1530 Monadnock Bldg., Chicago.

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GET complete description of these bargains: K Rambler, overhauled, new tires, delivered to you, \$750.00. E Rambler, wheel steer, new, never used, \$600.00. Cadillac A, overhauled, repainted, tonneau, hampers, horn, lamps, headlight, new tires, tools, \$650.00. '04 Ford tonneau, used as demonstrator, \$550.00. M. A. C., Motor Age.

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One 1904 Pierce Great Arrow, 4-cylinder.
One 1904 Pierce Arrow, 2-cylinder, with top.
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FOR SALE—Fredonia runabout in good condition, \$400. E. F. Dodge, 1405 Michigan Ave., Chicago.

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YOU WOULD KNOW WHY IT IS

The most simple in construction.
The most durable in wear.
The most powerful on hills.

The most accessible to adjust.

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C. A. COEY & CO., 1323-1325 Michigan Ave., Chicago, upon request will mail you a list of genuine bargains in used automobiles.

LOCOMOBILE—I have just bought a 1905 car which is my fourth Locomobile, and will sell the 1904 car, which is in perfect condition and includes canopy top, baskets and full equipment; \$2,800. Address W., P. O. Box 293, Glen Ridge, New Jersey.

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FOR SALE—Model E Rambler. Practically new. Front tires never been punctured. Address, F. Kaltenbach, 11 N. Jefferson street, Chicago.

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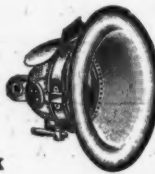
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The severe jolting of Motor
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Many have been disappointed lately by waiting—don't
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OLDSMOBILES, \$225 AND UP

Cadillac Model 8, with Touring, \$495 Page-Torpedo Sedan, \$495

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We have others—if you don't see what you want let me know—I'll find it for you

Automobile Supplies, Cheap, Cheaper.

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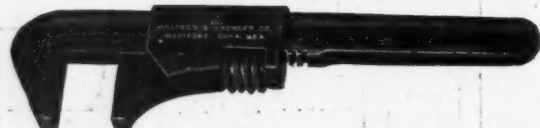
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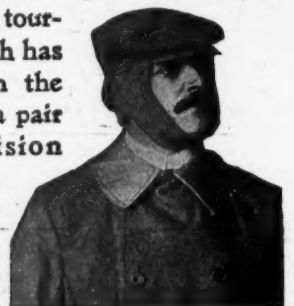
Position 1

SO favorably
were we im-
pressed with this
model which our
designers con-
ceived, that we
petitioned
for a patent
which has
been grant-
ed. The

illustrations clearly convey to the eye
the four functions which this cap faith-
fully answers. Figure one presents

a dignified tour-
ist cap which has
attached in the
back fold a pair
of wide vision
goggles cleverly
concealed.

Figure two
shows the
hood in



Position 2

service. The visor is flexible and

easily turned up
into the crown
of the cap when
the mask and
goggles are in
service as Figure
three de-
picts.

From the
wind, the
snow, the dust and rain does the
cap warrant immunity.

- Of Cheviot Cloth, in mixtures ;
Burberry Cloth, in grey or tan ;
Cravenette Cloth in mixtures ;
Covert Cloth in tan or brown ;
Linen in tan or any other fabric
of which our garments are
made, \$4.75
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Great Arrow, 24-28 h. p., side entrance, .	\$3500
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and correspondence to this end is solicited.

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